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OUR COUNTRY AND COLONIAL SUBSCRIBERS are requested to furnish any trade gossip that they may consider interesting.

Subscribers are requested to observe that, for the future, the receipt of THE CHEMIST AND DRUGGIST in a *Green Wrapper* indicates that with that number the term of subscription has expired, and that no further numbers will be sent until the same has been renewed. We issue the notice very respectfully, not that we distrust our Subscribers, but simply because we find it impossible to keep an immenso subscription list like that we now have, extending to almost every town in the world, in order without an exact system like this.

Editorial Notes.

I HAVE been asked to say something about your late editor, and I accepted the task partly with joy, and partly with extreme reluctance, fearing lest the most guarded expressions might lift too high the veil of privacy and betray the secrets of the hearth. I also knew the shrinking sensitiveness which characterizes all true men, and this I had a dread of wounding; and lastly, I was under peculiar difficulty, for the subject of my theme is one who has doubled the happiness, as he has largely increased the usefulness of my life. So I thought, that instead of some personal praise which might prove distasteful, I would describe him only in his editorial capacity, and show how it was that he raised this journal from an ingenious trade advertisement, into literature, and made it sound commercial property.

The main thing was, that he *went after* his contributors—he did not expect them to spring up spontaneously, still less to drop unbidden down his office chimney. He sought and found his men. Once within the charmed circle of his acquaintance, they were made personal friends, and there is no journalism worth a straw which is not conducted on similar principles.

In December last I ventured on the same experiment, and induced, much to their own astonishment, three of the foremost men in pharmacy to write for a shilling almanac. The second point was the rigid, faithful, and intelligent manner in which he corrected copy: this was done on the manuscript itself, seldom on the proof. Many writers are greatly indebted to his careful supervision, for he recognized to the full that the first duty of an editor is to watch over the reputation of his contributors, and we may say without exaggeration *nihil tetigit quod non ornavit*.

Lastly, that which specially entitled him to admiration, was his power of writing *précis*, of which an excellent

example will be found in his report of Stoddart's Norwich papers, where in the briefest space, all the facts are given, and the very mannerism of the lecturer is caught. I must not say more; I dare not have said so much, had I not been aware that he has a thoroughly competent gentleman for his successor—one trained to editorial work, and who well knows how to combine official duties with the courtesies of social life.

Good night, John Cargill, may all that is good attend you! may health with her strong arm support you! How shall I tell the outside world who and what you are? I can—"Charles Lamb turned Chemist."

Surely few have had closer friendships, or deserved them more; and could the warm wishes of all those with whom you have ever been brought in contact be of the least avail, you might rest contented with your lot.

JOSEPH INCE.

THE proprietors of this journal desire to express the regret they feel at parting with Mr. J. C. Brough, who has so ably edited the CHEMIST AND DRUGGIST for the last ten years. Early in the course of their mutual relationship they learned to appreciate his ability and perfect honesty of purpose, and were, therefore, enabled to give him *carte blanche* for its conduct, and have never had the slightest cause to regret the confidence reposed in him. Finally, they are very glad to be assured of his continued assistance in the future, and heartily congratulate him on his appointment to a position so well suited to his character and tastes—an appointment which they hope he will retain and adorn for many years in the possession of improved health and continued happiness.

THE new editor of the *Pharmaceutical Journal* has already commenced his troubles. The *Medical Press and Circular* kindly provides the first supply of hot water. Under the title "A New Thing in Journalism," we are told that Dr. Paul "has certainly signalled his accession to the editorship by an unprecedented act." It seems that Dr. Redwood had commenced to publish in the *Pharmaceutical Journal* a series of articles on the Sewage Question by Dr. Letheby, which had previously appeared in the *Medical Press and Circular*. These had not been completed when the new editor was appointed, and the remainder, therefore, came to him as a sort of stock-in-trade. "But," we now quote from our medical contemporary, "it appears the new editor does not agree with Dr. Letheby, and so takes the opportunity of adding foot-notes to his paper, controverting his conclusions. A finer specimen of impudence we never remember, and it augurs ill for the tone the journal seems likely to take under its new management. But this is not all: the notes, being unsigned, would give the idea that they were the author's, and so he might at first sight appear to contradict himself, while many would not read a paper so overlaid with foot notes, as if the writer could not or would not write clearly. In fact, we should ourselves have passed over this paper altogether, having already carefully digested it when it appeared in the *Medical Press*, but were struck by the number of notes of which we had no recollection, and began to read them to see whether Dr. Letheby had added them since our publication, and whether he had therein modified his opinions. We soon discovered the trick, and, as soon as we partially recovered our surprise at this editorial novelty, began to ask why in each case the words *Ed. Pharm. Journ.* had not been added to the notes. Could it be that the editor would not allow them as he really did not write them? Judging from internal evidence we should say decidedly they are not his own production. But surely it would have been more in consonance with editorial usage

to permit the person who wished to controvert Dr. Letheby, to write a paper in his own name, than to drag the organ of the Pharmaceutical Society into a controversy so acrimonious as that on sewage is becoming, and rashly to commit such a periodical to one side of a difficult chemical question that lies outside the bounds of pharmacy; and, above all, to rush headlong into this obtrusive discussion, against such a leviathan of debate as Dr. Letheby. It would really appear that the sewage question, while it grows more and more important, has been overlaid with so much personal or interested writing, so much determination to bear down all differences of opinion by any and every means, that men are being led by foregone conclusions to lengths that independent journals may well protest against. We shall have more to say on the general question in a future issue. Meanwhile we cannot refrain from saying that the Pharmaceutical Society ought not to be made a means of disseminating such notes as these we again protest against."

It is an interesting coincidence that the Seventh Annual Meeting of the British Pharmaceutical Conference, and the Eighteenth Annual Meeting of the American Pharmaceutical Association, will commence simultaneously, namely, on the 13th of September—the first at Liverpool, and its prototype at Baltimore. On another page we print a circular, which has been addressed to many wholesale firms in this country, from the Local Committee of the American Association, requesting the exhibition of drugs, pharmaceutical products, and articles of interest to the trade. Although the time remaining is short, it is sufficient, and we would suggest that many English houses might, with much advantage to themselves, benefit by this polite invitation. Our readers are already aware that an Exhibition of a similar character will also be held at Liverpool. The fact we have alluded to, that is, the simultaneous occurrence of these important gatherings—the old Association in the New World and the new Association in the old country—suggests an idea which we almost fear to express, lest it should be adopted, and thus result in the ruin of both. But what an interest it would add to both meetings if the Atlantic Telegraph could be kept employed between them, thus giving the opportunity for the representatives of each nation to join in the other's discussions. This happy thought may be realised some day, but we fear, not yet.

It might be regarded as a somewhat discourteous proceeding on our part if we inserted the correspondence which has reached us between Mr. Hampson, of Manchester, and the Editor of the *Pharmaceutical Journal*, without any comment. It is quite apart from our purpose to express either approval or disapproval of the course which the Council has taken in granting a pension to Dr. Redwood. Looking at the matter quite from an outside point of view, we are disposed to think that the transaction was one that reflected credit on all concerned. Dr. Redwood himself is certainly not to blame in that he has won such a testimonial; and on the part of the Society it may fairly be considered as a graceful act thus to express the satisfaction which many years of faithful work had given. Mr. Hampson deserves to be thanked for his courage and public spirit in calling attention to such a proceeding, and none of our readers will fail to appreciate the combined courtesy and tact which dictated the letters of Dr. Paul. It is well, however, that dissatisfaction, when it exists to any extent, should find expression, and we fully agree with our correspondent that the relations between the Council and the constituency are not yet perfect.

MR. WILLIAM CROOKES, the editor of the *Chemical News*, has entered on an investigation of the phenomena connected with Spiritualism. His first article on the subject, in the *Quarterly Journal of Science*, looks hopeful for the spiritualists. In a foot-note, referring to certain "mediums," he tells us, "As far as I have proceeded the preliminary tests have been satisfactory." Mr. Crookes, we hope, will not be led to take that little step from the sublime to—a belief in mediums.

Our offer of a prize for the best design for a dispensing counter has been responded to by twenty-eight competitors. Many of the designs we have received are beautifully drawn, and all are now in the hands of the three gentlemen, Messrs. Hills, Ince, and Savory, who, as we announced last month, had consented to make the award. We hope to exhibit the drawings and descriptions at the meeting of the Pharmaceutical Conference at Liverpool next month, and competitors will therefore oblige by leaving their drawings in our hands until after that meeting is over. We have to acknowledge the receipt of designs with the mottoes which follow:—"Carwardine," "Desideratum," "Duplex," "Work and win," "Wait and hope," "Audi, Vide, Tace," "Spero Vincere," "Try, B. W. S.," "Try, G. W.," "Fide et Fortitudine," "1809," "Ideas collected from the Profession," "Quality the test of value," "Duleamara," "Cui Bono?" "Frangas non flectes," "Eclipse," "Nil Desperandum," "Excelsior," "J. S.," "Hope," "Sorte tua contentus abi," "Cito, tuto, et jucunde," "Par sit fortuna laboris," and "Better Late than Never;" also three which, bearing no motto, we have distinguished by initials, namely, "E. M.," "C. M. F.," "W. D. T.;" one model, but no drawings, but with the appropriate motto, "Detur Digniori." We shall publish the judges' report next month, and a lithograph of the successful design. The following is a list of articles from which the prize may be selected, but we shall not object to give something else of equivalent value, if preferred by the successful competitor:—

Pharmacy microscope,	value 5 guineas	(Evans, Lescher, and Evans).
Aneroid barometer,	„ 5 guineas	(W. and J. Burrow, Malvern).
Binocular glass,	„ 6 guineas	„ „
Perfume fountain,	„ 6 guineas	(Rimmel).
Photographic apparatus, complete,	value 5 guineas	(Cooke).
Set of scientific apparatus,	value 5 guineas	} To be selected.
Library of books,	„ 5 guineas	

Our esteemed friend, Mr. J. C. Brough, lately the editor of this journal, has promised us a series of papers which will add much to the interest of our pages. We had hoped that the first instalment would have appeared in this issue, but Mr. Brough informs us that many engagements old and new, coupled with the fact that his health is not yet sufficiently restored to allow of much extra exertion, have prevented the fulfilment of his and our wishes. The absence of our French correspondent's letter will also be noted. We regret to learn that this omission is also occasioned by illness. In a note, dated August 11th, he writes us from Paris that "the absolute cessation of trade here just now almost justifies silence. Should the war eventually be carried on under the walls of Paris, I may be able to send you something interesting." Another Parisian correspondent, writing on the same date, says, "Business is bad here, but we have got over the worst of the local political excitement, by the formation of a new Ministry yesterday. If the Prussians can be kept at a respectful distance—and with the *levy en masse* now taking place I



Wm. H. Stoddart.

think they can—business will be something again. People feel better to-day.”

Nature gives the following programme of the arrangements for the approaching fortieth annual meeting of the British Association for the Advancement of Science, to be held in Liverpool, commencing on Wednesday, Sept. 14. President-elect—Professor Huxley, LL.D., F.R.S. Vice-Presidents-elect—The Right Hon. the Earl of Derby; Right Hon. W. E. Gladstone, M.P., D.C.L.; Sir Philip G. Egerton, Bart., M.P., F.R.S.; Sir Joseph Whitworth, Bart., LL.D., F.R.S.; S. R. Graves, Esq., M.P.; J. P. Joule, Esq., LL.D., F.R.S.; Joseph Mayer, Esq., F.S.A. Chairman of Local Executive Committee—The Mayor of Liverpool (Joseph Hubback, Esq.) Local Treasurer—Henry Duckworth, Esq., F.G.S. The sections are—(A) Mathematics and Physics; (B) Chemical Science; (C) Geology; (D) Biology; (E) Geography and Ethnology; (F) Economic Science and Statistics; (G) Mechanical Science. These will meet each day from eleven to three o'clock, in St. George's Hall, the Town Hall, Free Public Library, and other places to be duly announced. General and Evening Meetings—Wednesday, Sept. 14: The first general meeting will be held in the Philharmonic Hall, at 8 p.m., when Professor Stokes, M.A., D.C.L., will resign the chair, and Professor Huxley, LL.D., F.R.S., will assume the Presidency and deliver an address. Thursday, Sept. 15: The Mayor's First Reception at the Town Hall. Friday, Sept. 16: Lecture in Philharmonic Hall, at 8.30 p.m., by Professor Tyndall, LL.D.; the Mayor's Second Reception at the Town Hall. Saturday, Sept. 17: Address to Working Men, in Concert Hall, Lord Nelson-street, at 8 p.m., by Sir John Lubbock, Bart., M.P., F.R.S. Monday, Sept. 19: Lecture in Philharmonic Hall, at 8.30 p.m., by Professor Rankine, LL.D., F.R.S. Tuesday, Sept. 20: Soirée in St. George's Hall, at 8 p.m. Wednesday, Sept. 21: Concert in St. George's Hall, at 8 p.m. Thursday, Sept. 22: Excursions to several places. Members requiring further information should apply to any of the following Hon. Local Secretaries—Wm. Banister, B.A.; Reg. Harrison, F.R.C.S.; H. H. Higgins, M.A.; A. Hume, D.C.L., LL.D., Municipal-buildings, Dale-street, Liverpool.

The Parliamentary Session has closed, and its results, as far as we are concerned, can very soon be summed up. The provisions of the Pharmacy Act, as far as these relate to the regulation of the sale of poisons, have been extended to Ireland, and are embodied in a short Act, which we print entire in another page. About a fortnight before the end of the Session, the Earl of Morley introduced a new Petroleum Bill into the House of Lords which would have been of considerable service to chemists and druggists, by permitting the sale of benzine collas and suchlike articles without a licence. It passed the House of Lords, but came to the Commons too late, and was sacrificed in the usual manner. We have printed it, however, in our columns this month, in order that our readers may be acquainted with the proposed enactment, and in the hope that next session it may receive earlier attention. The Medical Acts Amendment Bill, which also passed the House of Lords, was a hasty piece of legislation, drawn up in the interests of the medical profession, but not satisfactory even to them. It was withdrawn before the second reading in the House of Commons. The medical journals claim the credit of being the authors of its defeat, which credit, however, is probably far more due to the Emperor of France. Altogether, we have but little to thank our legislators for, except the very sufficient reason that they have done us no harm.

MESSRS. DOMEIER and Co., of 47, Basinghall-street, write us in the name of the German Hospital Committee, on behalf of the wounded soldiers of both nations, who are now left to be provided for by Germany. As partisans of the sufferers alone, we gladly insert their address. “The quick retreat of the French armies has left a great many wounded soldiers to be provided for by Germany, and if we now ask our friends to assist the wounded by donations of MONEY, CARBOLIC ACID (Pure and Impure), CONDY'S FLUID, PERMANGANATE OF POTASH, in substance, QUININE, MORPHIA, WATER CUSHIONS, LINT, STICKING PLASTER, we can assure them in the name of the German Hospital Committees, to whom the same will be forwarded, that the treatment and assistance which the wounded French soldiers will experience at their hands will in every respect be like that administered to those of our own nation, and that those who were our enemies in battle are our brethren in hospital.”

WE are informed that Dr. Ernest Hart, who formerly edited the *British Medical Journal*, has been re-elected to that position, vacated by Dr. Hutchinson.

WE hear a rumour, apparently on good authority, that Mr. Betts, not satisfied with his recent complete overthrow in the Vice-Chancellor's Court, intends to carry the proceedings to the House of Lords. His worst enemies could hardly injure him more than he seems inclined to injure himself.

AN American Quarterly Journal of Medicine is to hand with the ominous title of the *Bistowry*. Its claim to notice is the amusing and reckless manner in which it is edited. It is particularly strong in original spelling. An eminent English physician is referred to as Dr. Letherly, while, on another page we read an account of an operation performed recently, headed “Sæsarian Section”! Hamlet was disrespectful enough to the memory of the great Roman, but he never insulted him like this.

W. WALTER STODDART, F.G.S., F.C.S.,

PRESIDENT OF THE BRITISH PHARMACEUTICAL CONFERENCE,
LIVERPOOL.

MR. STODDART was born February 24, 1824, in the picturesque little village of Freshford, near Bath. His father was partner in a well-known and extensive clothing firm in that neighbourhood, but shortly afterwards moved to Kidderminster, where the subject of our present memoir received the principal part of his education. At a very early age he showed a predilection for chemistry, and many were the scrapes into which he fell for making a laboratory of his bedroom. On one occasion, we believe, the household was alarmed by a midnight explosion, occasioned by an attempt at making phosphuretted hydrogen. When twelve years of age he became lame, and was supposed to be incurable; at the same time he suffered an irreparable loss in the death of an affectionate mother. A relative, who was a surgeon, and attended the funeral, noticed the lameness, and took him home with him to Wellington, in Shropshire, where, after a stay of three years, providentially a permanent cure was effected. On leaving school at the age of sixteen, in obedience to his father's wishes, but much against his inclination, he was placed in a carpet manufactory, where he learned the usual routine of weaving and dyeing.

All this time his spare hours were occupied in chemical and philosophical experiments, and he may have been often

seen poring over Rusc's ponderous Encyclopædia, or that capital old book, Turner's "Chemistry."

Three years afterwards, the carpet manufacture having been abandoned, Mr. Stoddart followed the bent of his inclination by becoming the pupil of Mr. Wm. Hodgkinson, now a member of the celebrated firm in Aldersgate Street.

After spending his allotted period of servitude with great advantage under his kind-hearted instructor, and six years with Messrs. Steele and Smith, of Bath, Mr. Stoddart commenced business for himself in Bristol, and soon became well-known as an analytical chemist.

The study of chemistry and natural philosophy were always regarded as a means of recreation, but proved the surest introduction to commercial success; and there is no question but that similar efforts will be crowned by the same success.

As a zealous supporter and contributor to numerous scientific societies, Mr. Stoddart has attained considerable popularity. His scientific contributions to various publications have been numerous and varied. Among others, we may mention papers on "A Singular Compound of Iodine and Quinine," and "On the Growth and Nature of *Sarcina Ventriculi*." Several more on potable waters, the rain, of Bristol and the air of town dwellings. Indeed, so many have there been that friends have wondered how the time could be found necessary for the prosecution of pursuits entailing so much labour. Nor must it be supposed that business was neglected, for few are more particular about regularity and punctuality in the hours allotted to business purposes. As a geologist and paleontologist, Mr. Stoddart's name is well known. Many a morning *primo mane* has he been seen, hammer in hand, among the rocky chasms of Clifton.

At a late meeting of the Geological Society of London, a paper was read by him on the lias formation of the Bristol neighbourhood. As a member of the Pharmaceutical Conference, of which he is this year President, nothing need be said, as the active interest taken at every meeting since its inauguration at Bath, is too well known to the members generally, and that, too, enhanced by the friendly relation in which he stands with his fellow-pharmacists.

In the year 1852 Mr. Stoddart married a niece of Mr. Wallis, a retired but well-known medical practitioner of Dorchester, who proved a suitable helpmeet and delighted participator in the pleasant ways of science.

We cannot leave him here with this dry detail of life circumstances. He owes his position to painstaking and never-weary industry. He has upset the theory that business and science are incompatible. Some time ago, at the Conference, he held his own on subjects of microscopic research; subsequently he produced two admirable papers at Norwich on "Honey" and "Lemon Juice." At Exeter he demonstrated his activity by an exposition of Spectral Analysis; but we should fail in our duty did we not transcribe the following passage from Attfield's "Chemistry":—"This is Stoddart's chemico-microscopic test. Into an ounce of distilled water drop 10 drops of dilute sulphuric acid (B.P.). To this add 14 grains (or as much as will saturate the acid) of the suspected salt. Filter through paper, and to a little of the filtered solution add a few drops of sulphocyanide of potassium (180 grains in 1½ ounce of water). An immediate precipitate of the several alkaloids takes place, each of which is distinct and characteristic. If Quinia and Cinchonia be present, they will all be seen on the slide, becoming more and more distinct during the first hour. A good plan is to place on a glass slip a drop of the solution to be tested, and to put another of the sulphocyanide by its side—the drops not being larger than good-sized pin-heads. Over both place

a piece of thin glass, which will cause the drops to touch. Examine the line of junction under an half-inch object glass, when the crystals are readily seen and recognised. By this method $\gamma\delta\delta\delta\delta$ of a grain of Quinia or Cinchonia may be easily detected. The particles arrange themselves into the respective groups—the long slender needles of the Quinia salt, the round crystalline masses of the Quinia, and the large well-formed prisms of the Cinchonia salts." Sincerely do we hope that Mr. Stoddart will not tire in his investigations; he has before him a future respecting which his friends are very sanguine.

PHARMACAL NOTES.

BY ALBERT E. EBERT.

NOT the least duty of the pharmacist, though one more honoured in the breach than the observance, is his obligation to communicate to his fellows of the craft such improvements in manipulation, in apparatus, and in the convenient arrangement of his shop, as his every-day experience behind the counter must occasionally suggest. How much practical, desirable information is hid under a bushel by this sin of omission, we can only conjecture; but if the thousands would communicate their personal experience, it cannot be doubted that a valuable fund of useful knowledge would accumulate. The following suggestions are made with no great claim for their originality or importance, but since they are based upon actual experience, they may be of utility to others as they have been to us.

Test tubes, indispensable for their legitimate purpose, will often answer another useful end. For effecting solutions of small quantities of the alkaline or metallic salts, especially when the solvent is of a viscid nature, we have found the test tube a valuable auxiliary—more convenient in use than the mortar, less wasteful, and effecting the solution with greater despatch. We proceed by dropping the salt into the tube, adding a portion of the vehicle, and applying heat, with constant shaking of the tube. Solution quickly follows, the warm liquid is added to the remainder of the vehicle, previously placed in the vial, and the whole is mixed by agitation.

Of course, the dispenser will see that this method of procedure is not applicable where the quantity of the salt exceeds its solubility in the whole liquid at ordinary temperatures, as crystallization would occur. This relation of salt to solvent is often met with, and then the only resort is to the mortar, in which the salt may be rubbed to powder before its mixture with the liquid, and the attachment of a "shaking label" to the vial. Solid extracts may be brought into solution by the same means with great facility.

The moral effect of such a display of chemical ware before the admiring eyes of the patient may be considered, in some rare instances, as equally beneficial with the product of the combined skill of the physician and pharmacist.

In spreading plasters extemporaneously, convenience requires, and neatness demands, an uncoated marginal edge. This is usually secured by pasting strips of paper along the edges of the skin, and removing them after the spreading of the plaster is effected. It is just here that a practical difficulty frequently arises. The paper edges are liable, from drying of the paste, to adhere so strongly that either paper or skin will give way upon an attempt at their removal: the application of water will then be necessary to soften the attachment, and the final result may be expected to present a daubed and uncleanly aspect. This difficulty may be entirely avoided by applying to the paste-brush a little glycerine before the adjustment of the marginal strips.

COATING OF PILLS.—A prevailing fashion in pharmacy, or rather among prescribers, is the use of sugar-coated pills. This is very detrimental to the practice of legitimate pharmacy, whatever may be its effect upon those who swallow the pills. An extemporaneous process of sugar-coating is a desideratum for which our colleges of pharmacy should unite in offering a prize. In the absence of this, a very excellent substitute may be found in resin. This substance is easily applied, gives a hard, tasteless surface, a handsome appearance, and has a decided tendency to protect the pills from change. The coating cannot interfere with their medicinal action, for it is readily dissolved by the fluids of the stomach. The process of coating is easy and expeditious, and no apparatus is required.

We proceed as follows, keeping prepared a solution of resin in ether, one part of resin to ten parts of the fluid. We return the pills after they have been rolled to shape to the mortar in which their ingredients were mixed, pour over them a little of the resinous solution, give the mortar a few twirls, and roll them out upon the platform of the pill-machine or pill-tille. By the time the label is prepared the pills will have become sufficiently dry to allow boxing. A little dusting powder, preferably lycopodium, should be dusted over them, and the work is done.

Speaking of pills, an idea occurs which is worth suggesting to the manufacturers of pill-machines—namely, that these convenient implements be made to cut thirty pills instead of twenty-four. The former number of pills is much more frequently prescribed than the latter. A great improvement would be the placing of numerals before each groove, so that the operator may not be obliged to count the grooves whenever a fractional number of pills are to be divided.

While making suggestions, we will continue by adding that there is a great need for vials, especially for half, one and two-ounce vials, with lips suitable for dropping liquids. With the ware of the market at present, it is almost impossible for an expert to be successful in dropping; so what must be the experience of invalids and nurses in this respect? The defect may be easily remedied by making the lips of vials for such uses broad and thin. If we insist in demanding such improvements as we are suggesting, manufacturers will be eager to supply them.

[We have quoted the foregoing useful article from the *Chicago Pharmacist*, and we hope to meet with further instalments of this practical sort of literature. *Apropos* of the author's hints as to plaster-spreading, we may, however, add a few remarks of our own. It is an art in which practice is not now so abundantly afforded as formerly, in consequence of the introduction and general use of machine-spread plasters. Nevertheless, it is always considered one of the signs of a good dispenser, to be able to turn out a clean and even plaster, and it therefore behoves all whose aim it is to be accomplished in their business to take advantage of all the practice they can obtain. Some dispensers pride themselves on being able to spread a plaster without any margin at all—a clever piece of manipulation, undoubtedly, but one the advantage of which is not apparent. As well might he boast of being able to make pills without a mortar. The objection to which Mr. Ebert refers, as attendant on the use of paper margin, is a very frequent one when paste or gum is employed to stick down the edges. Doubtless the mixture of glycerine would obviate the difficulty, but it is still better to avoid paste, gum, and glycerine, and merely to wet the marginal paper with the tongue. This is amply sufficient if the manipulator be not particularly clumsy, and it will then peel off without any difficulty, leaving no trace behind. Great care should

be taken that the iron be not too hot, as this is one of the most frequent causes of failure in the management of a plaster. Beginners too frequently make a mess of their work by vain attempts to finish off a plaster either with an iron too cold, in which a case a rugged surface may be relied on, or else with a re-heated iron, which is likely to run through plaster and leather as well, and which requires a very dexterous hand to manage carefully on a surface already spread. One word as to the spelling of the word—a matter which in England is not quite agreed upon. The old form, that is with an *i* in the middle of the word, is certainly a waste of energy, and might be universally dropped. The spelling would then properly agree with the pronunciation of the word.—*Ed. C. and D.*]

LONDON GINGER BEER.

DR. MUTER, in the *Food Journal*, is doing some good service by exposing the dangers which surround us in the tempting luxuries which the caterers for our hunger and thirst place before our eyes. Cheap sweets have lately been the subject of his scrutiny, and the results he has arrived at are anything but assuring. Certain popular confections, shaped like sugared almonds, but destitute of the usual interior, although the odour and taste were most powerful, are described as masses of sugar and sulphate of lime, slightly tinged on the surface with chrome yellow and red lead, and very highly favoured with essence of bitter almonds. In the last number of this interesting journal, he describes the results of certain analyses of cheap aerated beverages which we quote entire, although, at the same time, we would remind our readers that an analytical chemist is likely, almost unconsciously, to serve up his results in a rather sensational manner, especially if intended for general reading. We make this remark merely because we know of a series of experiments previously undertaken for this journal on the same kind of articles, the results of which were not published, as they did not seem to warrant the attention which would have been likely to have been aroused.

At this season of the year, says Dr. Muter, when every general shop in the metropolis exhibits at its door a table covered with little stone bottles, and decorated with the announcement, "Celebrated ginger beer, 1d. per bottle," it has seemed advisable that we should see what the "celebrated" drink really contains. We were the more inclined to this by receiving the other day some curious hints, under the following circumstances. Always anxious to be up to all the tricks of our great city, we some time ago replied to an advertisement offering to teach a lucrative trade, for a consideration in postage stamps. In reply to our note, we received from Mr. Do'em Brown a set of printed instructions for entering the profitable and elegant business of a manufacturer and retailer of summer drinks: and certainly, if we had followed the receipt, we could have sold at a good profit what would have been, to put it in its mildest form, quite a shilling's worth of dyspepsia for a penny. The question, therefore, naturally arose in our minds, whether the public is served with deleterious liquor under the sheep's clothing of aerated drink, and whether tectotallers float from the Scylla of alcohol, gently and comfortably into the Charybdis of lead and large daily doses of cream of tartar.

The use of aerated beverages is no new thing, as we find that it originated in the efforts of our Thurniesser (A.D. 1560), to imitate the natural effervescing springs of Germany. Many other inventors followed on the same track, but without anything like success until 1750, when Venel suggested the use of a mixture of a solution of carbonate of soda with

murriatic acid, the ingredients being brought together in a closed vessel. This was a step in the right direction, but it was reserved for our own countryman, Dr. Priestley, to demonstrate that carbonic acid gas could be made to dissolve in water by pressure, and would come off again with effervescence when the cause of solution was removed. This, coupled with the researches of Bergmann, by which he proved that seltzer water really contained carbonic acid in solution, led to the establishment of the first manufactory of aerated water at Stettin in 1787. The trade was soon afterwards commenced in Paris by M. Paul, who introduced the principle of generating the gas separately, and pumping it into the water; and we find that its popularity soon became established.

The proper mode of making aerated water is as follows:—The carbonic gas is generated by the action of sulphuric acid upon chalk. It is then passed into a gasometer exactly like those employed in our gasworks, only, of course, much less in size. From this gasometer it is pumped into the condenser, along with the proper quantity of water. In the condenser works an appliance called the "agitator," which assists in mixing the gas and water, thus hastening solution by exposing a larger surface of the latter to the action of the former. The pumping is continued till the gauge with which the condenser is fitted shows that the requisite pressure has been attained, and then the aerated water is ready for bottling. It has, however, as yet no flavour, and this has to be produced by putting a small quantity of lemon or ginger syrup into the bottles before running in the water from the condenser, or, in the case of soda water, by introducing a few grains (generally fifteen to twenty) of carbonate of soda in the same manner. Even when thus honestly prepared, the resulting beverage is apt to be bad, owing to defects in the machinery; and we will now notice the two most common contaminations and their causes.

1. Aerated water may be contaminated by lead and copper. This most dangerous effect may be caused in various ways.

1. The plunger of the forcing pump may be copper, instead of silver or glass, which it always ought to be. 2. The condenser may be simply soldered up, instead of rivetted. 3. The agitator may be made to work on a pivot inside the condenser, instead of passing through it. In this way the agitator always works in metal instead of leather, and it does this just where it is exposed to the highly solvent action of water charged with carbonic acid gas.

2. Aerated waters are liable to be tainted with sulphuric acid. This occurs where the gas is passed direct from the generator into the condenser without purification. When the gas is formed a certain quantity of sulphuric acid vapour always rises with it, and if this be not removed, it of course passes into and contaminates the water in the condenser.

With this short introduction, we now propose to give the results of our examination of the cheap aerated drinks.

1. *Lemonade*.—This article is, we find, sometimes, but very rarely, sold at 1d., although usually at 2d. per bottle. Each bottle should contain half a pint of aerated water, flavoured by means of a syrup made by dissolving sugar in diluted juice of lemons. A good and pure lemonade should show on analysis nothing but sugar and citric acid, and should have a pressure in bottle of at least 60lbs. to the square inch. Six samples were tested with the following results:—

No.	Contents of bottles.	Citric Acid.	Sugar. Per Bottle.	Tartaric Acid. Per Bottle.	Sulphuric Acid.	Copper or Lead.
1.	9 oz.	None	Nearly 1 oz.	9.21 grs.	None	None
2.	0½ pint	"	About 0½	29.46	"	"
3.	8½ oz.	"	"	17.50	"	"
4.	8½	"	"	17.50	"	"
5.	0½ pint	A little	"	40.00	"	Large trace
6.	0½	None	"	20.60	"	Trace

Thus we see that in the cheap lemonade there is rarely a trace of lemon-juice at all, the syrup being compounded of sugar, tartaric acid, and essence of lemons. In four cases out of six poisonous metallic contamination was abundantly evident. The aëration was very imperfect, except in the case of No. 4, but even in that sample it fell far short of the proper amount. The lemonades were all more or less turbid, and, under the microscope, revealed myriads of organised germs and cells with a bright nucleus.

2. *Ginger Beer*.—This article is commonly sold at 1d. per bottle. Pure and good ginger beer should be made by boiling an ounce of ginger and a pound of sugar in a gallon of water for some time; then straining off, adding a little yeast, and leaving the whole to ferment for twenty-four hours before bottling. During the fermentation, and subsequently in the bottle, the sugar is partly changed into alcohol and carbonic acid gas, which latter, being confined, causes a pressure to take place, under the influence of which it dissolves in the water, and is liberated with powerful effervescence when the cork is drawn. Real ginger beer is, therefore, not truly a teetotal drink; as, when good and well "up," it always contains a minute proportion of alcohol. In the common ginger beer, we find that the rule is to reduce the sugar and the ginger to the minimum possible quantity, adding cream of tartar and capsicum to contribute the sharpness and pungency so in vogue with the drinkers of the article. The beer is also commonly contaminated with iron, we presume from the boilers in which it is made. Six samples of this beverage were also tested, with the following results:—

No.	Contents of Bottle.	Acetic Acid. Per Bottle.	Cream of Tartar. Per Bottle.	Total Solids.	Metals.
1.	½ pint.	2.63 grs.	2.0 grs.	187.6 grs.	Iron.
2.	"	7.75	3.60	137.1	"
3.	"	11.00	4.00	226.0	Copper.
4.	"	9.60	4.00	172.5	None.
5.	"	2.30	3.50	244.5	"
6.	"	5.60	2.70	205.4	"

This table shows that in all the beers acetic acid had been formed, and some, such as 3 and 4, were very bad in this respect. These same numbers are also to be distinguished by an extra dose of cream of tartar, while No. 3 was found to contain copper, presumably from the vessels used in manufacture. One bottle smelt so strongly of petroleum that its contents were undrinkable.

Having thus seen what our cheap summer beverages are, let us consider what would be their effect on consumers. It is plain that in each bottle of lemonade we take a dose of tartaric acid, averaging about twenty grains, and the chances are two to one that we absorb a notable proportion of copper. In each bottle of ginger beer, on the other hand, we take about three and a-half grains of cream of tartar, and a variable amount of acetic acid, besides running the risk of metallic contamination. The properties of tartaric acid and cream of tartar are diuretic and purgative when taken in large doses, and when often repeated in small doses they tend to upset the whole digestive organs. On this point, Dr. Pereira says, in his *Materia Medica*:—"By continued use, it (cream of tartar) disorders the digestive functions and causes emaciation, most probably from defective nutrition." He makes a similar remark as to tartaric acid, viz.:—"Its continued use very readily disturbs the digestive organs." But, besides their intrinsic indigestibility cheap aerated waters expose their drinkers to the dangers of carelessness in manufacture. The contaminations resulting from imperfect machinery have been already shown, but the risk daily run from careless washing of the returned bottles is no unimportant consideration. The case of poisoning through lucifer matches in a badly-washed bottle, will still be fresh in the memories of most of our

readers; and the instance of the bottle smelling of petroleum which we had, is a proof that no more caution is used now than then. We will willingly admit that much cannot be expected for a penny or twopence, but we are surely entitled to demand that the cream of tartar, tartaric acid, and copper should be left out of the programme. The whole system of cheap drinks wants revision in this country, for those now in use are certainly crude in the extreme. We envy the Parisians, with their neat and clean syphons of the simple aerated water, which can at once be turned into any drink by letting it run on to a spoonful of pleasant fruit syrup, previously placed in a glass. Even were it honestly made, our ginger beer is not a wholesome thing; because in drinking it we consume a half-fermented liquor, in which the acetous fermentation has generally freely developed itself. What man, who has ever felt the pangs of dyspepsia, could wish a fellow-creature a worse fate than to be condemned to the consumption of a few bottles of No. 3, which contains:—1. Enough acetic acid to make a table-spoonful of common vinegar. 2. Four grains of cream of tartar. 3. A trace of copper; and the whole imprisoned in a bottle smelling of paraffin!



Chap. 26.

An Act to regulate the Sale of Poisons in Ireland.

[14th July, 1870.]

A.D. 1870. **W**HEREAS it is expedient for the safety of the public that due provision should be made to regulate the sale of poisons in Ireland:

Be it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

Articles named in Schedule A. to be deemed poisons within meaning of this Act.

1. The several articles mentioned in the Schedule A. to this Act annexed shall be deemed to be poisons within the meaning of this Act; and the King and Queen's College of Physicians in Ireland may from time to time, by resolution, declare that any article other than those mentioned in the said schedule and in such resolution named ought to be deemed a poison within the meaning of this Act; and thereupon the said College shall submit the said resolution for the approval of Her Majesty's Privy Council in Ireland, and if such approval shall be given, then such resolution and approval shall be advertised in the *Dublin Gazette*; and on the expiration of one month from such advertisement the article named in such resolution shall be deemed to be a poison within the meaning of this Act.

Regulations to be observed in the sale of poisons.

2. It shall be unlawful to sell any poison, either by wholesale or by retail, unless the box, bottle, vessel, wrapper, or cover in which such poison is contained be distinctly labelled with the name of the article, and the word "poison," and with the name and address of the seller of the poison; and it shall be unlawful to sell any of the poisons which are named in the first part of Schedule A. to this Act annexed, or which may hereafter be added thereto under section one of this Act, to any person unknown to the seller, unless such person is introduced by some person known to the seller; and on every sale of any such article the seller shall, before delivery, make or cause to

be made an entry in a book to be kept for that purpose, stating, in the form set forth in the Schedule B. to this Act annexed, the date of the sale, the name and address of the purchaser, the name and quantity of the article sold, and the purpose for which it is stated by the purchaser to be required, to which entry the signature of the purchaser and of the person (if any) who introduced him shall be affixed; and any person selling poison otherwise than is herein provided shall be liable to a penalty not exceeding five pounds for the first offence, and to a penalty not exceeding ten pounds for the second or any subsequent offence; and for the purposes of this section the person on whose behalf any sale is made by any apprentice or servant shall be deemed to be the seller; but the provisions of this section which are solely applicable to poisons in the first part of the Schedule A. to this Act annexed, or which require that the label shall contain the name and address of the seller, shall not apply to articles to be exported from Ireland by wholesale dealers, nor to sales by wholesale to retail dealers in the ordinary course of wholesale dealing, nor shall any of the provisions of this section apply to any medicine supplied by a duly qualified apothecary, nor apply to any article when forming part of the ingredients of any medicine dispensed by a duly qualified apothecary, provided such medicine be labelled in the manner aforesaid with the name and address of the seller, and the ingredients thereof be entered with the name of the person to whom it is sold or delivered in a book to be kept by the seller for that purpose; and nothing in this Act contained shall repeal or affect any of the provisions of the Act of the fourteenth and fifteenth years of the reign of Her present Majesty, intituled "An Act to regulate the sale of Arsenic."

3. The provisions of the Act of the twenty-third and twenty-fourth years of the reign of Her present Majesty, intituled "An Act for preventing the Adulteration of Articles of Food or Drink," shall extend to all articles usually taken or sold as medicines, and every adulteration of any such article shall be deemed an admixture injurious to health.

Adulteration of Food or Drink Act to extend to medicines.

4. Every penalty recoverable under the provisions of this Act shall be recoverable in a summary way, with respect to the police district of Dublin metropolis subject and according to the provisions of any Act regulating the powers and duties of justices of the peace for such district or of the police of such district, and with respect to other parts of Ireland before a justice or justices of the peace sitting in petty sessions, subject and according to the provisions of the Petty Sessions (Ireland) Act, 1851, and any Act amending the same, and shall be applied according to the provisions of the Fines Act (Ireland) 1851, or any Act amending the same.

Recovery and application of penalties.

SCHEDULE A.

PART I.

Arsenic, and its preparations.

Prussic acid.

Cyanides of Potassium and all metallic cyanides.

Strychnine, and all poisonous vegetable alkaloids and their salts.

Aconite, and its preparations.

Emetic tartar.

Corrosive sublimate.

Cantharides.

Savin, and its oil.

Ergot of rye, and its preparations.

PART II.

Oxalic acid.

Chloroform.

Belladonna, and its preparations.

Essential oil of almonds, unless deprived of its prussic acid.
 Opium, and all preparations of opium or of poppies.
 Preparations of corrosive sublimate.
 Preparations of morphine.
 Red oxide of mercury (commonly known as red precipitate of mercury.)
 Ammoniated mercury (commonly known as white precipitate of mercury.)
 Every compound containing any of the poisons mentioned in this schedule, when prepared or sold for the destruction of vermin.
 The tincture and all vesicating liquid preparations of cantharides.

SCHEDULE B.

Date.	Name of Purchaser.	Name and Quantity of Poison sold.	Purpose for which it is required.	Signature of Purchaser.	Signature of Person introducing Purchaser.

A NEW PETROLEUM BILL.

THE following is the text of the new Bill introduced into the House of Lords by the Earl of Morley, but withdrawn by Government for want of time to pass it:—

"33 AND 34 VIC.—PETROLEUM (H. L.).—A BILL, INTITULED AN ACT TO AMEND THE PETROLEUM ACTS, 1862 AND 1868.

"Whereas it is expedient to amend the law relating to the sale and keeping of petroleum and other substances of the like nature:

"Be it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:—

"1. This Act may be cited as the Petroleum Act 1870.

"2. This Act shall be construed as one with the Petroleum Acts, 1862 and 1868, and those Acts and this Act may be cited together as the Petroleum Acts, 1862 to 1870.

"3. Section 4 of the Petroleum Act of 1868 shall not apply to petroleum kept by a dealer for sale by retail, if such dealer comply with the following conditions, viz.:—

"(1) That the petroleum is kept in separate glass, earthenware, or metal bottles, each of which contains not more than half a pint, and is securely corked; and

"(2) That the aggregate amount of petroleum kept by the dealer, supposing the whole contents of the bottles to be in bulk does not exceed three gallons; and

"(3) That each bottle has attached thereto a label in legible characters stating as follows:—'Great care must be taken in bringing any light near to the contents of this vessel, as they give off an inflammable vapour at a temperature of less than one hundred degrees of Fahrenheit's thermometer.'

Every dealer who acts in contravention of any of the above conditions shall be liable to the forfeiture and penalty prescribed by Section 4, of the Petroleum Act, 1868.

"4. Any officer authorised by the local authority may purchase petroleum from any dealer in it, or may, on producing a copy of his appointment, purporting to be certified by the clerk or some member of the local authority, or producing some other sufficient authority, require the dealer to show him all or any of the vessels in which petroleum in his

possession is stored, and the place of the storage thereof, and to give him samples of such petroleum on payment of the value of such samples. When the officer has by either of the means aforesaid taken samples of petroleum, he may declare in writing to the dealer that he is about to test the same, or cause the same to be tested in manner provided by this Act, and it shall be lawful for him to test the same or cause the same to be tested at any convenient place, at such reasonable time as he may appoint, and the dealer or any person appointed by him may be present at the testing, and if it appear to the officer or other person so testing that the petroleum from which such samples have been taken has been kept, offered, or exposed for sale contrary to the Petroleum Acts, 1862 to 1870, such officer or other person may certify such fact, and the certificate so given shall be receivable as evidence in any proceedings that may be taken against a dealer in petroleum in pursuance of those Acts; but it shall be lawful for a dealer proceeded against to give evidence to show that such certificate is incorrect, and thereupon the Court before which any such proceedings may be taken, may appoint some person skilled in testing petroleum to examine the samples to which such certificate relates, and to declare whether such certificate is correct or incorrect.

"Any expenses incurred in testing any petroleum of such dealer in pursuance of this section shall, if such dealer be convicted of keeping, selling, or exposing for sale petroleum in contravention of the Petroleum Acts, 1862 to 1870, be deemed to be a portion of the costs of the proceedings against him, and shall be paid by him accordingly. In any other event, such expenses shall be paid by the local authority out of any funds for the time being in their hands.

"5. The temperature at which petroleum gives off an inflammable vapour shall, for the purposes of the Petroleum Acts, 1862 to 1870, be tested in manner set forth in the schedule to this Act.

"6. Any petroleum sold or exposed for sale in contravention of Section 5 of the Petroleum Act, 1868, shall be liable to be seized, and upon conviction of the person selling or exposing for sale the same to be forfeited.

"7. Sections six and eight of the Petroleum Act 1868, and the schedule to that Act, are hereby repealed.

SCHEDULE.

"DIRECTIONS FOR APPLYING THE FLASHING TEST TO SAMPLES OF PETROLEUM OIL.

"The cup which is to hold the oil shall be of thin sheet iron or of metal blackened on its inner surface; it shall be two inches deep and two inches wide at the opening, tapering slightly towards the bottom; it shall have a flat rim projecting from the edge of the cup by which it shall be supported in a metallic vessel four inches and a half deep and four inches and a half in diameter, it shall also have a wire stretched across the opening, which wire shall be so fixed to the edge of the cup that the upper side of the wire shall be a quarter of an inch above the upper side of a circular wire, which shall be fastened round the inside of the cup a quarter of an inch below its upper edge. The thermometer to be used shall have a round bulb about half an inch in diameter, and shall be graduated upon the scale of Fahrenheit, every ten degrees occupying not less than half an inch upon the scale.

"When the instrument is to be used, the petroleum to be tested shall be poured into the cup till the liquid rises just to the upper side of the circular wire. The outer vessel shall be filled to within an inch of its edge with water, and a small flame shall be applied to the bottom of the outer vessel. When the temperature of the water has risen

to 80°, the eup which contains the oil to be tested shall be placed in the outer vessel and the thermometer shall be inserted into the oil, so that the bottom of the bulb shall be immersed about one inch and a half between the surface. A covered screen blackened on the inside and provided with a hole in the cover for the passago of the stem of the thermometer shall be placed over the apparatus, and shall be of such dimensions as to surround it about two-thirds, and to reach about eight inches above the level of the vessels. The temperature shall be raised gradually, so that it shall require about five minutes to raise the oil from 80° to 95°.

"When heat has been applied to the water until the thermometer has risen to about 90° Fahrenheit, a very small flame, such as that from a piece of burning twine, shall be quickly passed across the surface of the oil, on a level with the wire. If no pale blue flicker or flash is produced, the application of the flame is to be repeated for every rise of two or three degrees in the thermometer. When the flashing point has been noted, the test shall be repeated with a fresh sample of the oil, using water at a temperature of 80°, as before, withdrawing the source of heat from the outer vessel when the temperature approaches that noted in the first experiment, and applying the flame test at every rise of two degrees in the thermometer.

"N.B.—In performing the test, the operator must be careful not to produce any current of air which would remove the vapour from the surface of the oil, either by breathing upon the surface or by any sudden movement."

MEDICAL GLEANINGS.

[WE purpose under this heading to offer the readers of the CHEMIST AND DRUGGIST a digest of such items of medical matters, as may seem of general interest, occurring during the month. For this object, the medical journals of this country, of America, and of the Continent will be laid under contribution. As a rule, clinical and therapeutical reports will not come within the scope of these papers, nor are we anxious to descend very frequently into the small squabbles concerning "professional etiquette" which so often exercise some of our medical contemporaries. This definition of the top and bottom limits of our purpose, showing what our objects are not, will sufficiently explain what they are; and, therefore, with this introduction, we leave our contributor at liberty to wander through the fields open to him, and to cull such specimens as shall come within his range.—ED. C. & D.]

The Medical Act Amendment Bill which the Government has bravely tried to pass this session, fell, pierced by many opposing petitions, on July 26th. It had passed through the Lords, and the second reading in the House of Commons had been announced, when Mr. Forster informed Dr. Playfair that in consequence of the short time left for work this session it would not be possible to give such due consideration to the wishes of the medical profession as was necessary, and that, therefore, the Government had decided for the present to withdraw the Bill altogether. This course seems to have given general satisfaction to those concerned. The *Lancet* a week previously summed up the objects of the Bill and the objections to it in these words:—"The rejection of this Bill would be a misfortune. It will not only be the loss of labour and trouble on the part of Lord De Grey and Mr. Simon, for which the profession must feel grateful to them, but it will perpetuate a state of things in our examining boards which has been publicly disparaged to an extent which requires its speedy remedy. The nineteen bodies competing with each other, giving a one-sided, imperfect diploma, cannot go on. It is high time that the unity of medicine was recognised by Act of Parliament. General practice is the sphere in which a man requires the know-

ledge of the whole art of medicine. And the time is gone for giving general practitioners exclusive diplomas—for dubbing one man a surgeon, and another an apothecary. But the Act of 1858 continues these distinctions, and entitles men to be registered on the strength of imperfect examinations. It must, therefore, be amended; but its amendment must be thorough. We must not pretend to amend it, and leave things very much as they are. We must not be content with creating three new boards to compete with the nineteen already in existence; and we must not perpetuate a Council that represents old narrownesses and obsolete divisions of the healing art. Indeed, only one misfortune can be greater than the rejection of this Bill—that it should be passed in its present shape.

The election of Sir William Ferguson to the President's Chair of the College of Surgeons is highly satisfactory to the whole body throughout the country. His career has been characterised throughout by an earnest devotedness to the advancement of his profession, and by all he is admitted to be a prince of operators.

Dr. Jonathan Hutchinson has resigned the editorship of the *British Medical Journal*, but it has not yet transpired who is likely to be his successor. Referring to this announcement, the *Lancet* satirically remarks:—"The Association appears to 'expend' its editors very rapidly, though we are not surprised that Mr. Jonathan Hutchinson should have found editorial labours incompatible with the multifarious duties in which he is engaged. Whilst the Association pays its editor less than the salary of its general secretary, and at every annual meeting demurs to the sums paid to the editorial staff, we are not surprised that the thankless office of servant to many masters is constantly vacated."

Death has of late removed several of the most eminent British physicians, among whom we may mention Sir James Y. Simpson, Sir James Clark, Professor Syme, and Dr. Copland.

In various ways these gentlemen had attained, and all thoroughly deserved, the highest eminence. Sir James Simpson's fame is indissolubly associated with his services to suffering humanity by the introduction, on anything like a general system, of chloroform as an anæsthetic. Sir James Clark, who had reached the patriarchal age of eighty-two, was a favourite at court. But he did not owe his position to this fact exclusively. He won the confidence of his patients, and his sensible plan of treatment, using all hygienic and dietetic means which reason offered, and not relying entirely on the materia medica, was a standing protest to the system which was more in vogue forty years ago than now, and doubtless his influence has done much to induce the more rational system of treatment which now prevails. Mr. Syme was *par excellence* a surgeon and a professor of the art. For thirty-six years he occupied the chair of Clinical Surgery in the University of Edinburgh, a position which he filled with the greatest credit to himself and advantage to those who came under his instructions. Dr. Copland's claim to fame, says the *British Medical Journal*, rests mainly on his performance of that gigantic work which he undertook, and carried to completion after a labour of thirty years. On finishing his *Medical Dictionary*, he wrote in the preface that "his labours, which had been incessant for many years, had been persisted in under circumstances and contingencies which few could have endured. . . . Every line in it was written by his own hand, and all the proofs were carefully read and corrected by himself." The amount of research and time spent in the production of the *Dictionary* must have been enormous; and the perseverance of the author such as few men possess. The *Dictionary* is a cyclopædic résumé of all that has been written on the various subjects treated in it, from the earliest days of medicine down to modern times, with copious references to all the sources of information; and with all this are given the opinions which the author's observation and experience had led him to form. That one man should have undertaken, and, labouring single-handed or nearly so, completed such a work, is indeed a remarkable fact. The work is a monument of calm energy and self-reliance, such as is but rarely met with. In Albert Von Graefe, of Berlin, too, the profession has lost one of its most brilliant ornaments, and the world a great benefactor. He was young, only forty-four, but he had lived long enough to win for himself renown as perhaps the

greatest ophthalmic surgeon that ever lived. His great work, accomplished after long and patient research, was his discovery of the cure of acute glaucoma—a disease which terminates in permanent blindness, and which had hitherto baffled all treatment. Singular accounts are given both of the noble character and remarkable personal appearance of this gifted professor. It is said that his face so closely resembled one of the extant portraits of our Saviour, that he was known among some of the less reverent of his countrymen by the cognomen of *Christus*—a fact which sufficiently implies its highly spiritual type of beauty. The *British Medical Journal* promises to publish his portrait.

On June 3rd the following message was sent to New York, from London, through the Atlantic Cable:—"Value of Vaccination.—Physicians of Paris report that the practical value of vaccination as a preventive of small-pox has been professionally demonstrated by actual observation in that city during the past month." Who paid for the transmission of this remarkably novel piece of information we are not informed, but the gentleman whose out it should really have added the equally novel intelligence of the death of Queen Anne. But in connection with this, it is important to call attention to certain statistics published in Paris by M. Besnier, and referred to by the *Medical Times and Gazette*, which, while they in nowise controvert the established value of vaccination, do most strongly inculcate the importance of its repetition. In the article to which we have alluded, we read that, "Among the small-pox patients at the Maison Municipale de Santé under M. Besnier's care, it was quite exceptional that they had not been vaccinated in childhood, and yet the mortality was at the beginning of the epidemic not less than 18 to 20 per cent. Of twenty-three patients dying only one had not been vaccinated; four exhibited no vaccine scars; but in eighteen there were well marked vaccinal cicatrices. In fact, the duration of vaccinal influence may be much more ephemeral than is generally supposed, and during a severe epidemic like the present, all cases without exception should be revaccinated. M. Besnier has obtained a perfect vaccine pustule in a child four years and some months old, who four months before he had vaccinated with complete success, as testified the magnificent cicatrices. The question, then arises whether a single inoculation should be considered sufficient, and whether it should not be repeated until no result whatever is produced. So with revaccination, for it is a complete error to suppose that absence of success of revaccination is a proof that the immunity conferred by vaccination persists. It is usually supposed that patients who prove refractory to all attempts at vaccination, possess also an immunity from small-pox. During the present epidemic several such have died."

In the *Practitioner* for August, some analyses of Condyl's Patent Fluids are given, the result showing, of course, that these preparations are solutions of manganates, and permanganates of soda and potash. The writer compliments Mr. Condyl on the possession of "the merit of introducing these salts to the general public as most valuable deodorizers and purifiers." "But," he adds, with a scarcely perceptible shade of satire, "though the initiative in establishing their manufacture on a large scale thus belongs to Mr. Condyl, he seems to have allowed himself to be outstripped in their economical production." A table is then given, which compares the oxidising power of the several preparations with that of chemically pure permanganate of potash, obtainable retail at 2s. the ounce. In this respect, 56.14 fluid ounces of the green fluid, worth, retail, from 1s. 9d. to 3s. 7d., according to the quantity in which it was purchased, is said to be equivalent to one ounce of the permanganate, which is taken as a standard. Of the red fluid, 55.99 fluid ounces, retail from 3s. 6d. to 6s. 10d., was required to accomplish the same results; while the power of one ounce of permanganate in the Ozonised Water would cost from £3 6s. 9d. to £9 6s. 5d., according as it was purchased in 4 oz. or 8 oz. bottles. We may also add, that what are called the retail prices, seem to be those of the co-operative stores, the Ozonised Water having been obtained for 1s. 8d. and 3s. respectively, and the sixpenny and shilling bottles of the fluid are said to retail at 5d. and 11d. respectively.

What a luxury it must be to be an invalid in Philadelphia. We find in the *Medical Independent* of that city, descriptions

of the many lady doctors established in practice there. Here is a condensed list:—

Mrs. Hannah E. Longshore, M.D., enjoys a lucrative practice, realising an income of 10,000 dols. per annum, having the confidence and esteem of her patrons; while in her domestic relations she is faithful and affectionate.

Her sister, Jane V. Myers, M.D., resides in her family, and enjoys a large practice.

Ann Preston, M.D., occupies the chair of Physiology and Hygiene, in the College, as well as that of Dean of the Faculty. At the last Annual Commencement, held at Musical Fand Hall, March 12th, 1870, she delivered the valedictory address, which was characterised by its thought, appreciation of the needs of the young practitioner, and high moral tone.

Mary J. Scarlett, M.D., a woman whose daily walk mirrors the true woman; the nobility of soul, justice to all, and energy of purpose, characterise her professional career. None know her but to love, and feel the gentle, soothing influence she must impart, to all who come to her for ministrations and advice. She occupies the position of Prof. of Anatomy in the College, filling it with much credit, being clear and concise in her teachings.

Mrs. Emeline H. Cleveland, M.D., holds the position of Prof. of Obstetrics, and Diseases of Women and Children with much satisfaction to her coadjutors and credit to herself. She possesses a peculiar skill, adapting her to this department of medicine, and has a large and lucrative practice.

Mrs. E. J. Burnside, M.D., a woman in the prime of life, of a bright and vivacious disposition, whereby she cheers and dissipates the fears of the afflicted who consult her; combining with it a keenness of perception and capability of a correct and early diagnosis, so requisite to a successful practice. She is alive to all that interests by no means a *one-ideaed* woman. She now reaps a plentiful harvest from the seed sown by patient and earnest toil, not only in a pecuniary aspect, but in the goodwill of her numerous patients and professional brethren with whom she consults.

Elizabeth Warrington, M.D., within a very few years has built up a lucrative practice by an indomitable will and earnest purpose. A woman of sound judgment and sterling worth.

Ruth A. French, M.D., practises homœopathy, and is attending physician to one of our prominent charities.

Her sister-in-law, Mrs. Harriet S. French, M.D., is consulting physician in the same institution, practising under the same "pathy." She also reaps largely from scattered seed.

Mrs. Sartain, M.D., a graduate of an Ohio school, a lady of talent, retiring in disposition, and unostentatious in deportment, attracting attention by her quiet, but successful practice alone. A woman of fine womanly instincts, loved and appreciated by her family and friends, attending promptly to the wants of those placed under her care. She is also ranked among the homœopaths.

Another adherent of the Hahnemann school is Miss Minna Piersol, whose practice is lucrative, while she pursues the "even tenor of her way." Both of these ladies enjoy first-class patronage.

ON FLUID EXTRACTS.*

BY E. H. SARGENT.

THE great importance which attaches to this class of preparations, and the near approach of the revision of the Pharmacopœia, must constitute my excuse for presenting the following suggestions:—

Simplicity is a cardinal virtue, either in or out of a pharmacopœia, but more especially in the construction of formulas for the use of American apothecaries.

That pharmacists should prepare all, or nearly all, the Galenical preparations which they are called upon to dispense, will admit of no doubt; it therefore is a duty to simplify our processes in such a manner that they will, while meeting the requirements of medicine, induce all pharmacists to manufacture these preparations for them-

* From the *Pharmacist*.

selves, yet it is undeniably a fact that only a small minority do so, and the reason may be sought for with some profit, if it, when found, induces a change for the better. It is hardly necessary to call attention to the great variety of fluid extracts offered for sale, nor to the well-known dissimilarity in the productions of different manufacturers, showing utter neglect of the Pharmacopœia in nearly all cases, and in some a sad lack of the proper medicinal strength, thereby materially impairing the moral force of the Pharmacopœia, and, what is of greater importance, furnishing inferior medicine to the sick. The injustice of dispensing inferior preparations falls chiefly upon the physicians and their patients; as the physician can determine the dose proper to be administered only from his knowledge of the drug itself, it is of the utmost importance that the preparation shall fairly represent a known quantity of the drug. The quantity is immaterial, so that it is known, as the fitness of any preparation for a certain use must be left for the physician to decide, from his knowledge of it; and the knowledge must be definite or he may fail, and place in danger the life of his patient. The physician lacking this knowledge, has no method of determining the character of a preparation (until he has seen its effect) except by its physical properties, and all must be aware how little can be known from the taste, smell, or appearance of a fluid extract, showing the importance of employing a standard that shall not be violated by the caprice, or the more unworthy motive of avarice, of the vendor. It certainly is no light matter to trifle with life and health; the laws of conscience, if not the laws of the land, should prevent it, and every incentive should be presented that is possible to encourage both the pharmacist and the manufacturer to prepare and sell only official preparations, whenever formulas are supplied.

In considering the present official formulas for fluid extracts, it may be asked—What is the design or purpose of a formula? The reply will be, that pharmacists may prepare the article as ordered. Then it must follow that all formulas should be constructed so as to adapt them to general use. Such certainly was the intention of the revisers of our own national Pharmacopœia, but after a trial of ten years, are the results satisfactory with the class referred to? It will not be denied that, with a few exceptions in our larger cities, apothecaries depend upon the manufacturing specialist for the supply of fluid extracts. In looking for a reason, may we not safely assert that nearly all the objections met with originate in the practically impracticable formulas of the Pharmacopœia, requiring, as they do, a degree of skill, a perfection of manipulation, and an honesty of purpose, which, at least, are none too common. This charge made against pharmacists may lead some to suspect that ordinary honesty is a rare quality in the trade, but the inference is not a fair one. The objections to the present formulas are many and serious. The extracts offered by manufacturers are recommended by leading medical journals, and appear satisfactory to physicians, who, it may be stated, have learned their strength by experience, and, therefore, know what quantity to prescribe, so that wilful dishonesty is not charged; but the fact remains, as the writer has verified by many inquiries, that not over 10 per cent. of the apothecaries in the U. S. prepare or sell fluid extracts made in accordance with the formulas of the U. S. Pharmacopœia. It may be said that the greater fault is with the apothecary, but how shall it be remedied is the serious question. No ordinary arguments or appeals for the authority of the Pharmacopœia will suffice. The difficulty must be met by removing all excuse for it, and the furnishing of practical formulas for fluid extracts, suited to the requirements of the limited trade of the majority of American pharmacists. The best method for removing the difficulty should be honestly sought and applied. To the writer, no other yet presented promises so much as the suggestion of Mr. Diehl, so ably advocated in the *Pharmacist* for April, by Mr. Bartlett, showing the advantage of a reduction in the strength of fluid extracts. It points out an easy and unobjectionable method for correcting the greatest abuse that pharmacy and medicine now suffer from. It is necessary to keep in mind, when considering proposed reforms, that we must take the world as we find it, time being necessary for reconstruction. It is also the part of wisdom to make only such laws as we are able to enforce. Is it wise, therefore, to retain a series of

formulas that not one out of ten apothecaries will attempt to use? Rather, is it not our duty to so modify the formulas that each well-disposed pharmacist will prepare what he requires for dispensing? There need be no compromise with ignorance, nor dishonesty in this matter, for the better reasons are all in favour of the proposed change, while it is difficult to name a sufficient reason for maintaining the present standard. Perhaps the best one adduced is that it is convenient for physicians to remember the proportion of "ounce to ounce," yet it is difficult to imagine a memory so poor as to forget the proportion of one half ounce of the drug to the fluid ounce of extract, particularly when we now have two preparations of that strength.

The only other reason urged, of any weight, is that such a standard was adopted ten years ago, and has been generally advocated as the right one, yet, to admit this as a good argument, would prevent making any changes in our present formulas. Further, this supposed reason is negatived by the fact, that the fluid extracts in common use are not made by this standard, nor equal it in strength.

Experience should lead to improvement, and prejudice should be cast aside in questions of so much importance as this.

The present system forces a compromise with right by compelling a large majority of druggists to use the inferior preparations so extensively advertised by specialists, each claiming to be better than his neighbours, and also claiming some marvellous method of his own for cheapening medicines. The evil complained of is not confined to fluid extracts, as it is becoming a too common habit to prepare tinctures and syrups from these inferior commercial preparations. It is by such use that the lack of proper quality becomes most apparent. The writer has been shown tinctures and syrups thus prepared which bore no resemblance to the official, yet were dispensed in full assurance that the effect would be satisfactory.

The concentration of vegetable tinctures beyond a certain limit, by the use of heat (even *in vacuo*?), tends directly to the injury of the same, as well as to unnecessary expense and difficulty in the process. No one who has prepared official fluid extracts can doubt that this limit has been passed, yet no advocate for the present strength has proposed to dispense with partial evaporation, nor can it be otherwise.

The larger dose which will be required if the strength is reduced, may be named as an objection; but it has, in most instances, no value. The dose, as at present made, will vary with the drug used, from one drop to a teaspoonful, but in all cases the dose, whatever it may be, is given diluted, and the quantity of the drug being the same, the diluted dose will be no larger in one case than in the other. It may be urged that a larger quantity of alcohol will be given, but only in a few instances will the objection hold good, and in none to a mischievous extent. The use of glycerine and sugar, in many preparations, taking the place of a portion of the alcohol, forming far more palatable vehicles; and when it is kept in mind, as it should be, that the majority of fluid extracts sold scarcely exceed this reduced strength, these fancied objections vanish, as the dose, in most instances, will not be increased noticeably, if at all, as any prescription file will demonstrate.

No apothecary who dispenses official fluid extracts can have failed, occasionally, to find himself in difficulty from the dangerous doses prescribed of veratrum, conium, hyoscyamus or belladonna (the prescription being based upon the use of commercial preparations).

It may be said that the physician is at fault, but that does not relieve the difficulty in the least; such has been, and such will be the case so long as this difference exists. It may be further urged that all this class of fluid extracts (the narcotic) are far more concentrated than is desirable, either for the physician or the pharmacist.

There is an old saying that "if the mountain will not come to Mahomet, Mahomet must go to the mountain." In this case it may apply, and even at the risk of apparent concession, it may still be both prudent and right to concede, where it is evident folly and injury to insist.

The pharmacist will rarely, and the specialist will never, make their fluid extracts according to the present official formulas, nor by others involving similar objections, for evident reasons. Why not change the standard to one that

each will faithfully observe, for similar reasons, *i.e.*, self-profit. All of the more powerful could be more safely used, be more uniform and more reliable, if made of the reduced strength, which, at least, would counterbalance any apparent objection in those less powerful; farther, all the fluid extracts could be of uniform strength, including cinchona and wild cherry.

By following the proposed method of Mr. Bartlett, each pharmacist, no matter how limited his trade, could properly prepare his own fluid extracts, without needless loss of material, or unnecessary expense, a desideratum that no other method proposed will accomplish, yet of the greatest importance, both to the individual, and in its influence upon the progress of pharmacy.

Let us, by all means, have formulas for this very important class of preparations, which shall commend their use to the retail apothecary, and in view of the near approach of the revision of the Pharmacopœia, no time is so opportune as the present for agitating the question of what the standard strength and process shall be.

The following table illustrates the proper dose of nearly all of the fluid extracts (official strength) which are largely prescribed, except the cinchona and wild cherry, of which the strength will not be changed by the proposed reduction:—

	16 oz. to pint.	8 oz. to pint.
Aconite	1 to 3 drops.	2 to 6 drops.
Belladonna	1 „ 3 „	2 „ 6 „
Blackberry	$\frac{1}{2}$ fl. drachm.	1 fl. drachm.
Black Cohosh	$\frac{1}{2}$ „	1 „
Buchu	$\frac{1}{2}$ „	1 „
Colchicum	5 to 10 drops.	10 to 20 drops.
Conium	5 „ 10 „	10 „ 20 „
Dandelion	1 fl. drachm.	2 fl. drachms.
Ergot	$\frac{1}{2}$ „	1 „
Gelsemium	5 to 10 drops.	10 to 20 drops.
Gentian	$\frac{1}{2}$ fl. drachm.	1 fl. drachm.
Henbane	10 to 15 drops.	20 to 30 drops.
Ipecac.	3 „ 20 „	6 „ 40 „
Jalap	$\frac{1}{2}$ fl. drachm.	1 fl. drachm.
Leptandra	$\frac{1}{2}$ „	1 „
Mandrake	$\frac{1}{2}$ „	1 „
Nux Vomica	3 to 10 drops.	6 to 20 drops.
Pink Root	1 fl. drachm.	2 fl. drachms.
Rhubarb... ..	10 to 30 drops.	20 to 60 drops.
Sarsaparilla	$\frac{1}{2}$ to 1 drachm.	1 to 2 drachms.
Seneka	$\frac{1}{2}$ fl. drachm.	1 fl. drachm.
Senna	1 „	2 „
Stillingia	$\frac{1}{2}$ „	1 „
Valerian... ..	$\frac{1}{2}$ to 1 drachm.	1 to 2 „
Veratrum Viride	2 to 4 drops.	4 „ 8 drops.

It will be seen that in only five of the above examples, when reduced, a dose exceeding a teaspoonful will be required in ordinary cases, and in each of the five the alcoholic strength need not exceed that of dilute alcohol. In ten of those remaining the dose will range from 3 drops to 30; of those yet remaining the dose will average one fluid drachm.

ON SUPPOSITORIES.

By HERMAN KOCH.*

AS the application of medicinal substances in the form of suppositories seems to be growing in public favour, I beg leave to make a few suggestions for the benefit of such practitioners as are not supplied with metallic moulds, and may not possess facilities for obtaining the same. The following plan for obviating the use of the latter which I have followed for some time, gives a product of uniform size, shape and weight, and besides being cheaper than metallic moulds, possesses the additional advantage of never spoiling the product by splitting or detaching pieces from the sides.

This is my plan: Take a piece of soft wood cut in the rounded conical shape of a suppository, allowing a portion of the wood in the centre to extend beyond the larger end as a handle; roll a small square piece of waxed paper around the cone-shaped end of same, slanting off toward

one of the corners. Secure the latter by a drop of mucilage, and the point by a vigorous twist between the fingers. Remove the paper and lay aside until the mucilage is dry, then reinsert the wooden cone, mark edge of same on the paper by encircling closely between thumb and forefinger, and lastly trim off close to said edge with a sharp knife. Keep the moulds thus formed in a cigar box, the lid of which has been perforated with two or three rows of small round holes, which will serve to keep them in a vertical position when used. I generally keep on hand three sizes of moulds, holding respectively one, two and three scruples, and mark the wooden cones accordingly. These moulds cannot be used more than once, but can be so readily reproduced that this is scarcely a disadvantage.

NURSING SYRUP AND WORM LOZENGES.

THE following recipes have been sent to us (*American Journal of Pharmacy*) by Mr. Henry C. Morse, pharmacist of Elmira, N. Y., with the assurance that they are the real formulæ of the preparations indicated, and that they are at the service of the readers of the journal. Mr. Morse remarks:—

“The nursing syrup is an excellent preparation, and is sold quite extensively with us, not as a patent medicine, but from the large bottle, as we do ‘Godfrey’s Cordial,’ being a much finer looking preparation, not unpleasant to the taste, and quite as harmless.

“The ‘Worm Confections’ might be used in places where there is a demand for reliable goods in that shape, and when one does not like to recommend patent medicines of unknown composition.”

“Mrs. Wheeler’s Nursing Syrup.”

R Sacchari	3xxxv.
Liquoris Calcis	xl.
Extracti Papaveris fluidi	xlv.
Olei Anisi	ij.
Extracti Podophylli Aquati	ss.
Spiriti Rectificati	ij.
Misce.	

“Mrs. Wheeler’s Worm Confection.”

R Hydrargyri Chloridi Mitis	3j.
Sacchari	3x.
In pulv. subtilis. tere.	
Adde.	
Sacchari	3xxv.
Santonini	3vi.
Misce et fiat. rhom. No. 360.	

Please observe that the syrup contains about two drops Extractum Papaveris fluidum in each teaspoonful; and the confections contain one grain Santonin and one-sixth of a grain of Calomel in each tablet.

The Ext. Podophylli Aquati is of the same strength as the ordinary fluid extracts, 16 troy oz. to the pint.

Pharmaceutical Society of Great Britain.*

MEETING OF THE COUNCIL,

August 3rd, 1870.

MR. SANDFORD, PRESIDENT, IN THE CHAIR.

MR. HASELDEN, VICE-PRESIDENT.

Present: Messrs. Atherton, Bottle, Bourdas, Brady, Edwards, Groves, Hills, Reynolds, Savage, Stoddart, and Woolley.

The minutes of the last meeting were read and confirmed. Mr. WOOLLEY desired to move that the portion of the minutes referring to the grant of an annuity to Dr. Redwood should be excepted from confirmation, but it being ruled that, according to the Bye-laws, Section 6, Clause 3, “All resolutions carried at the meetings of the Council, except such as relate to the Bye-laws, shall be acted upon without confirmation,” he was deemed out of order. Mr. Woolley thereupon lodged a protest against the funds of the Society

* From the *American Journal of Pharmacy*.

* From the *Pharmaceutical Journal*.

being dealt with in such a summary manner as that in which the grant to Dr. Redwood was voted.

The following letter, received by the President from Dr. Redwood, was read:—

"To the President and Council of the Pharmaceutical Society of Great Britain.

"Gentlemen,—Although I deeply regret the decision of your Board, by which I have been removed from the position I so long occupied as editor of the *Pharmaceutical Journal*, I must beg to express to you my thanks for the liberal spirit in which you have acknowledged the services I have endeavoured faithfully and zealously to render to the Society from its first formation, and which I shall still hope to find some means of continuing to render.

"I am, yours truly,

"August 1st, 1870."

"T. REDWOOD.

It was moved by Mr. Bottle, seconded by Mr. Savage, and Resolved unanimously—That the President be requested to forward to Mrs. Orridge, on behalf of this Council, a letter of sympathy and condolence in her recent bereavement, and that a minute thereof be entered in the Transactions of the Society, as a recognition by the Council of the valuable services rendered to the Society by the late Mr. B. B. Orridge, and more especially so in furthering the objects of the Benevolent Fund.

A letter from the Medical Department of the Privy Council Office was read, confirming the appointment of the two Examiners for Scotland, Henry C. Baidon and Alexander Noble, nominated at the last meeting of the Council.

The Report of the Finance Committee was presented, showing on the General Fund account a balance in the Treasurer's hands of £986 5s. 9d. And submitting for payment accounts, etc., amounting to £711 16s. 6d. On the Benevolent Fund Account, a balance of £560 11s. 11d.

Resolved—That the Report be received and adopted, and payments made.

Resolved—That the Treasurer be requested to purchase the following Government Securities:—

Consols. Benevolent Fund Account. . . £461 12s. 10d.
New 3 per Cents. General Fund Account £1200 0s. 0d.

And for this purpose the £1,000 on deposit account at the Bankers' was ordered to be withdrawn.

The Report and recommendations of the Library, Museum, and Laboratory Committee having been read, it was

Resolved—That they be received.

Resolved—That the Report of the House Committee be received and adopted.

On the recommendation of the Committee for the appointment of Sub-Editor of the *Pharmaceutical Journal*, it was

Resolved—That Francis Passmore be appointed, at a salary of £150 per annum.

The Report and recommendations of the Benevolent Fund Committee having been read, it was

Resolved—That the sum of Ten Pounds be granted to a Member at Oxford.

The Board of Examiners reported that one Candidate presented himself for the Senior Bell Memorial Scholarship, and seven for the Junior.

The former failed to obtain the requisite number of marks in his examination to establish his title to the Scholarship.

The Junior Scholarship was awarded to Henry Churchill, with free Laboratory instruction and materials for the Session 1870-71.

SESSIONAL PRIZES.*

The Board reported that during the past Session twenty-nine Candidates had passed the Minor Examinations in honour, of whom eleven had competed for the Prize of Books.

On the report and recommendation of the Board, the prize was awarded to Edward Alfred Webb.

The Professors presented their respective Reports of the results of the competition for the Prizes offered by the Council, which, having been read, the following awards were declared:—

CHEMISTRY AND PHARMACY.

Bronze Council Medals ...	...	Equal { Charles Fryer.
		{ Frederick Hamilton Peck.
Certificate of Honour ...	...	Henry Forster.

BOTANY AND MATERIA MEDICA.

Bronze Council Medal ...	...	Edward Alfred Webb.
Certificates of Honour ...	...	Frederick Hamilton Peck.
		Charles Fryer.
Certificates of Merit ...	...	Henry Forster.
		John Pim Jackson.
		Everton Sainsbury.

PRACTICAL CHEMISTRY.

Bronze Council Medal ...	...	Charles Fryer.
Certificates of Honour ...	...	George Bult Francis.
		Thomas Fitcher Best.
		William Raffle.
		Everton Sainsbury.
		Edmund Henry Metcalfe.
Certificates of Merit ...	...	Edward Alfred Webb.
		Frederick Hamilton Peck.

The Professor of Botany reported that four Herbaria had been received in competition for the Prize.

The following awards were made:—

Silver Medals ...	...	Edward Rammell.
		Edward Alfred Webb.
Certificate of Honour ...	...	Alexander Wood.
Certificate of Merit ...	...	Charles John Stansby.

Notice of Motion,—Mr. Savage, Mr. Brady.

That in the Sessional Examination in future Silver Medals be awarded for the first prize, and Bronze Medals for the second. Certificates of Honour and Merit as heretofore.

Resolved—That the following, being duly registered as Pharmaceutical Chemists, be respectively granted Diplomas stamped with the seal of the Society:—

Adams, Frank ...	...	Stoke-on-Trent.
Bland, Thomas Frederick ...	...	Stourbridge.
Clarke, Richard Feaver ...	...	Torquay.
Cotterill, Samuel ...	...	Southampton.
Gibbs, James ...	...	Bedford.
Griffiths, Waldron ...	...	Harrow-on-the-Hill.
Hart, Charles Henry ...	...	Torquay.
Howie, William Lamond ...	...	Edinburgh.
Jackson, John Pim ...	...	Leeds.
Mason, Robert William ...	...	Rugby.
Pilley, Henry Thomas ...	...	Lincoln.
Pitts, Phineas Reynolds ...	...	Hingham.
Raffle, William ...	...	South Shields.
Robson, James Crosby ...	...	Darlington.
Romano, Frederick William Richard ...	...	Rio Grando do Sul.
Thompson, William Milner ...	...	Thirsk.
Walton, Jonathan Sparke ...	...	Haydon Bridge.
Webb, Edward Alfred ...	...	Clapham.

Resolved—That the following Pharmaceutical Chemists be and are hereby elected Members of the Society:—

Bland, Thomas Frederick ...	...	Stourbridge.
Clarke, Richard Feaver ...	...	Torquay.
Dewson, Frederick Stokes ...	...	Birmingham.
Hanson, Thomas ...	...	Bombay.
Pitts, Phineas Reynolds ...	...	Hingham.
Robson, James Crosby ...	...	Darlington.
Romano, Frederick William Richard ...	...	Rio Grande do Sul.

William Thomas Phillips, of Carmarthen, having paid his subscription for the current year (due 1st of January last), and a fine, was restored to membership.

Resolved—That the following Registered Chemists and Druggists be elected Members of the Society:—

Balcomb, John ...	...	Cheltenham.
Bowden, William ...	...	Patricroft.
Clarke, Thomas Allen ...	...	Horncastle.
Hopkinson, Thomas ...	...	Grantham.
Johnson, Joseph Garwood ...	...	Barnsley.
Kingsford, Frederick ...	...	54, Piccadilly, London.

* The Sessional Prizes and Certificates will be distributed at the Evening Meeting on the 5th October next. Successful candidates will be expected to attend. An Address to the Students will be delivered by Mr. Schacht, of Clifton. Ladies are invited to be present.

Knowles, Charles W. ...	Thorne, Yorkshire.
Lockwood, George Alfred ...	Sheffield.
Newham, Benjamin ...	Sheffield.
Place, William Byron ...	Betley.
Riches, Thomas... ..	Torquay.
Sharples, George William ...	Blackpool.
Shipley, William... ..	Ashbourn.
Stockman, Frederick ...	200, Essex-rd., London.

The following, having passed the Modified Examination, and being in business on their own account, were elected Associates, with the privileges granted by Sect. 20, Pharmacy Act, 1868:—

Clift, Martin Luther ...	London.
Jarvis, John ...	Dunstable.
Searle, William George ...	Manchester.

The following having passed their respective Examinations, were elected Associates of the Society:—

Butterfield, Edward ...	London.
Butterworth, Albert ...	Sowerby.
Bowen, John William ...	Handsworth.
Braddock, Henry ...	Oldham.
Carroll, Denis ...	Dublin.
Clark, Walter Beales ...	Leicester.
Diaper, Albert ...	Bury St. Edmund's.
Green, Marryat H. ...	London.
Habgood, Henry... ..	Wells.
Haydon, William Frederic ...	Blandford.
Hogg, Joseph Fawcett ...	North Shields.
Keightley, Joseph ...	Tunstall.
Longley, John William ...	Leeds.
Margetts, George William ...	Fakenham.
Page, William Henry ...	London.
Storey, Edward Henry ...	London.
Sumner, Benjamin T. ...	Herncastle.

Modified.

Atkinson, Leonard ...	London.
Bates, John Freer ...	Manchester.
Dawney, Charles... ..	Exeter.
Deane, Frederick Dawson ...	Jersey.
Dodds, John Henderson ...	Walsall.
Grindell, John ...	London.
Jenkins, David ...	Bridgend.
Johnson, Henry ...	Barnsley.
Moyle, Joseph ...	London.
Organ, Edward ...	Bristol.
Perkins, John Jaquest ...	Stafford.
Rowell, John Childs ...	Reading.
Scott, Joseph ...	Worcester.
Smith, John Charles ...	London.
Squire, James ...	Lewes.

The Secretary reported that the Local Secretaries appointed at the last meeting of the Council for Aberdare and Oxford had declined to accept office; whereupon it was

Resolved—That the following be appointed:—

Pratt, Joseph, for Aberdare.
Tuck, John, for Oxford.

The Registrar was authorised and directed to remove from the Register of Chemists and Druggists the name of Edward Charles Whisken, of Welchpool.

The consideration of the precautions necessary for the "Sale and Keeping of Poisons" was again deferred.

Chemistry and Pharmacy.

BY SIDNEY W. RICH.

A NEW ALKALOID.

IN *Cosmos* we find a statement by M. Oser, that whenever fermentation is induced by the use of yeast in syrups a new alkaloid is formed, to which the author assigns the formula, $C_{26}H_{20}N_4$. The hydrochlorate of this base crystallizes in hygroscopic tables of bitter taste, which become brown under the influence of air. It would seem that all fermented liquors contain this alkaloid or one of its compounds, the presence of which in wine or beer would probably

assist in the explanation of such effects on the animal economy produced by these beverages, which cannot be attributed to the action of alcohol alone.

NEW PROCESS FOR THE ASSAY OF CINCHONA BARKS.

IN *l'Union Pharmaceutique* we find a communication by M. P. Carles, concerning the assay of cinchona bark. According to the author, the method by precipitation with tannin does not answer, because substances other than the alkaloids are precipitable by tannin; and, moreover, any departure from exact neutrality will cause solution of a portion of the alkaloid. The estimation of the lime in cinchona barks, from which the amount of alkaloid may be approximately calculated, owing to the relations existing between the two, is not by any means exact. The various methods based on extracting the alkaloids from the bark by acidulated water, and subsequent precipitation with ammonia or carbonate of soda, are all liable to errors, in consequence of the solubility of the alkaloid in water, and, further, by the simultaneous precipitation of a portion of colouring matter. Methods based on the extraction of the alkaloids from the acidulous decoction, to which potash has been added, by agitation with chloroform, are also open to various objections. The above methods will, however, approximately effect the determination of the total quantity of alkaloids present in bark; but since quinine is the active principle, it is necessary not only to estimate the exact quantity of quinine present in a given sample, but more especially the quantity of crystallizable sulphate which can be extracted therefrom. The author, therefore, studies the processes of MM. Maître, Glenard and Guillermond, and Rabourdin. These processes are severally condemned, on the ground that they do not enable the operator to obtain the whole of the alkaloid, and particularly the quinine, in a state of purity. Decoction gives products not only coloured but modified in character; lixiviation dilute fluids, which dissolve the alkaloids. The author hopes to overcome all difficulties by the following process:—

A fair sample of the bark is reduced to fine powder (we recommend the operator to pass it through a hair sieve); 20 grammes of this are mixed in a mortar with 6 grammes of slaked lime, previously rubbed down with 25 grammes of water. This mixture is dried over a water-bath. As soon as it is apparently dry, it is bruised and somewhat tightly packed in a glass displacement apparatus, closed below by a plug of cotton-wool, and treated with successive quantities of chloroform, of which about 150 grammes should suffice so completely to exhaust the powder that no residue is left on evaporation of two or three of the last drops. Any chloroform adhering to the powder is removed by displacement with water, and received in a capsule. The chloroform is evaporated over a water-bath, and the residue treated several times with dilute acid, containing 10 per cent. sulphuric acid. This solution, passed through a very small filter, is heated to boiling, and then treated with enough ammonia to nearly neutralise the acid. The whole of the quinine then crystallizes as sulphate, which may be collected in a filter, washed with a few drops of water, dried and weighed. The other alkaloids remain in the mother-liquors. The author asserts that this process furnishes the best results, that it can be executed in a few hours, and is very exact.

DEATH FROM AN OVER-DOSE OF STRYCHNIA.

It often happens that medical men give prescriptions in which they display a sad want of chemical knowledge. We remember an instance in which a mixture of citrate of potash and sulphate of quinia was ordered; the reaction which occurred necessarily caused the formation of citrate of quinia, a salt which was precipitated, thereby effecting

the removal of nearly the whole of the quinia. A similar case is mentioned in the *American Journal of Pharmacy*, but the ingredients here were of a much more serious nature. A physician prescribed a mixture in which iodide of iron and hydrochlorate of strychnia figured. The first bottle was consumed in safety by the patient, but death ensued on taking the last dose from the second bottle. The evidence given before the coroner's jury showed that iodide of strychnia had been deposited at the bottom of the bottle, an excessive dose of which had caused death. The writer of the article draws attention to the fact, that on page 1418 of the U.S. Dispensatory, 13th edition (1870), "the impropriety of combining solutions of iodine and strychnia in prescriptions" is declared. The moral of such a case as this is evident, but who is blame—the physician who wrote the prescription or the druggist who made it up?

Veterinary Notes.

BY W. HUNTING, M.R.C.V.S.

CONTAGIOUS LUNG DISEASE OF CATTLE.

RECENT reports shew that this disease is still prevalent in many counties. As it spreads solely by contagion, is foreign to this country, and so capable of total extinction, a few remarks on it cannot be misplaced.

Though only fatal in about twelve per cent. of properly treated cases, it entails heavy losses on farmers by loss of condition and milk, not to mention the extra labour and anxiety.

A proper understanding of the disease will enable us not only to rationally treat it, but to give such advice as may stay its spread, and help to banish it from the country.

"Lung disease," or pleuro-pneumonia, is as truly a malady depending upon blood-poisoning by a specific virus as small-pox. It never arises from overcrowding, bad ventilation, or any mysterious condition of the ground or atmosphere. It requires the presence of a specific poison, which may be obtained from a diseased animal, either directly or indirectly. The difficulty of always tracing the carrying medium explains the origin of cases when no apparent source of contamination is near.

It must be remembered, too, that a considerable time may pass between the advent of the poison and the appearance of symptoms. Whereas an animal brought into contact with cattle plague shows the disease in about a week, this "incubative period" in lung disease may extend over eight or nine, and is usually from two to three weeks; so that in isolating newly-bought animals, a farmer should be careful to continue the separation over any probable period of incubation, say at least a month.

Pleuro-pneumonia has done sad damage in Australia. They need never fear the importation of cattle-plague by live animals, as the short period of incubation would have ceased, and symptoms be well marked before half the voyage was over. An animal with lung disease, on the contrary, might contain the virus, and yet show no symptoms for some time after landing.

As to the nature of the disease, I may say that the blood contains an animal poison, that one or both lungs are affected as a local complication, and that the tendency to death is by exhaustion. The changes in the lung are the same as in ordinary inflammation of that organ, and its pleura or covering, consisting of partial or total consolidation of one or both lungs with effusion into the chest and false membranes, which latter frequently fix the lung to the ribs.

I speak of the diseased lungs as a *local complication*. I mean by this that although such lesion is always present, it is not the primary part of the disease. People are apt to look upon it as *the* great mischief which must be heroically combated, whereas it should be considered as only secondary to the state of the blood, just as the eruption or local complication of small-pox or measles. It must not be neglected, as it is the index to the condition of the whole disease, and often of itself the immediate cause of death. If both lungs are much affected death is speedy; but in the ordinary cases of partial consolidation of one lung, death is more remote, and seldom occurs if proper care and treatment be pursued.

Symptoms.—If animals are out at grass, the first thing noticed is the separation from the others of affected individuals, a symptom common to all other diseases. In the stall, dulness and loss of appetite first attract attention; then we have increased rapidity of the pulse and breathing. As the disease becomes confirmed, a painful grunt accompanies each expiration; pain is evinced on pressing the spaces between the ribs, or on pulling the dewlap. The animal is mostly always lying. Such as cannot auscultate may make an almost unfailling diagnosis of which lung is affected by noticing the side the animal usually lies on. The side of the diseased lung is lain on, so as to afford freer play to the healthy one; the breast is lain on when both sides are affected equally.

Diagnosis.—Pleuro-pneumonia may be confounded with "fardel bound," or impaction of the third stomach, the similarity being in the grunt during expiration. In this disease, however, there is no pain on pressure of the ribs, and there is a most obstinate constipation.

Cattle, like all other animals, may be the victims of ordinary pleuro-pneumonia, caused by cold, etc. The history of the case is a good guide; but the safest plan is to diagnose all such cases as the worst form, and so use all precautions, as the symptoms are too much alike to found a positive opinion on.

The occurrence of these cases of "sporadic" pleuro-pneumonia, followed by no others, is apt to make people doubt the contagiousness of the other disease with which they are confounded.

Treatment.—The indications to be followed are—

- 1st. To attempt the elimination of the poison by increasing the activity of the excretory organs.
- 2nd. To attend to the local complication.
- 3rd. To support the system.

We follow the first indication by giving a dose of some aperient, as

Magnes. Sulph. 1 lb.
Sulphur Sub. 1 oz.
Zingib. pulv. $\frac{1}{2}$ oz.

The following mixture is also useful, as acting on skin and kidneys:—

Sp. Eth. Nit. 1 oz.
Liq. Ammon. Acet. (dil.) 2 oz.

It may be given twice a day in a little water, but should be discontinued so soon as the kidneys act freely. The animal should be warmly clothed.

We follow the second indication positively by the application of rugs to the chest, rung out of boiling water, and changed when cool, and negatively by allowing cool air, and neither bleeding nor blistering the poor animal. In the second stage, we endeavour to promote absorption of effused materials by stimulants, diuretics, and iodide of potassium in half-drachm doses.

We follow the third indication by careful selection and frequent change of food.

As rumination is suspended, we trust to gruels and

mashes at first, linseed being especially valuable. With these we combine, more particularly after the acute symptoms have passed, stimulants to rouse the stomachs, as ginger, pimento, etc. When the animal seems inclined to eat, allow carrots, turnips, green oats, grass, hay, corn or whatever seems to please, according to the season of the year. I believe strongly in a pint of good ale twice a day for all convalescents, and also in the virtues of such vegetable tonics as

Cinchona pulv.	} of each $\frac{1}{2}$ oz.,
Zingib. pulv.	
Carui pulv.	

or coriander.

Should a strong stimulant be required,

Ether. Sulph. $\tilde{\text{ss}}$.

Sp. Pimento $\tilde{\text{ss}}$.

Sp. Ammon. Arom. $\tilde{\text{ss}}$.

in a little gruel, supplies a very good one. Carbonate of ammonia in two-drachm doses may be given daily from the commencement. It is a good stimulant, and is thought to have some specially favourable action on the blood.

The treatment of all cases should commence by separating them from any other cattle, and all sheds where diseased animals have stood should be thoroughly washed out and disinfected.

Individuals may prevent the ingress of lung disease amongst their cattle by submitting all newly-bought animals to a quarantine. The country has laws to prevent its spread, but they are useless for want of proper administrators.

Homœopathy.

THE HOMŒOPATHIC PHARMACEUTICAL SOCIETY OF
GREAT BRITAIN.

THE following is the second report of this small but energetic Society, lately issued, a copy of which has been furnished to us by the hon. secretary:—

In looking back upon the second year of the existence of this Society, your committee feel that while there are some things that look hopeful, there are others which seem discouraging. There is hope in the fact that, financially, our position is good; and that though our numbers have not increased, we have shown no material decrease, having lost two members only. It must not be forgotten that the number of homœopathic chemists is small, that our Society claims two-thirds of that number as its members, and we may confidently hope that as the resources of the Society develop, our numbers will be augmented. There is apparent discouragement in the fact that the attendance at the monthly meetings has been smaller than might reasonably be expected. This is in some degree explained by the circumstance that so many of our members reside long distances from town, and it is not always convenient to leave business at the time the meetings are held; but this inability to be present does not explain the want of sympathy with, and in the work of the Society.

The first meeting of our Society for the present session was held on October 19th, 1869, when it was proposed and carried that the papers read should (with author's permission) be printed and forwarded to each member. The following gentlemen promised to read papers, viz., Messrs. Ross, Turner, Gould, Parsons, Woolcott, and Ashton; all of which promises have been redeemed, with the exception of Mr. Ashton's, whose paper, along with two others, viz., Messrs. Peal and Butcher, stand over to the next session; Mr. Ashton, on "The Preservation of Mother Tinctures;"

Mr. Peal, on "Causticum;" and Mr. Butcher, on "Glycerine." The first, second, and fourth have been printed, two have been circulated amongst the members, and Mr. Parsons' will be in the hands of the members in the course of a few days.

At the December meeting it was, after some considerable discussion, deemed advisable that members should announce the fact of their membership on their trade advertisements, with a view of making the Society more generally known. It was also arranged that the Society's meetings should henceforth commence at 8 p.m., instead of 7.30 p.m., to suit the convenience of those who were prevented from attending at the earlier hour, in consequence of business claims.

At the January meeting of the Society we had a carefully written paper on "Homœopathic Pharmacy," by Mr. Turner, which elicited considerable discussion.

The February meeting was taken up with considering correspondence on various matters, chiefly relative to the action of the Registrar and the Pharmacy Act; and an interesting paper on "High and Low Dilutions relatively considered," was read by Mr. Gould, which gave rise to an animated discussion. The Society wished to publish this paper, but the author declined.

The March meeting was occupied, after the usual routine of business, by a paper on the "Medication of Pilules and Globules," by Mr. Parsons, the author giving some interesting results in this branch of Pharmacy; the opinions advanced caused considerable comment and criticism, in which all present took part.

At our April meeting, in addition to the ordinary business, a paper was read by proxy, from Mr. Woolcott, of Leamington, on "Triturated Tinctures." Much disappointment was felt that the author of this paper could not be present to advocate his views, owing to his inability to leave business at that time. The Society was, however, especially glad to receive this paper, being the only contribution during the session from country members.

The May meeting of the Society resulted in the voting of the sum of £25 out of the Society's funds for the purchase of books, also a microscope for the use of members; and the following works were selected to form the nucleus of a circulating library, viz., Hogg's "Vegetable Kingdom," Pereira's "Manual of Materia Medica," Hamilton's "Flora Homœopathica," Balfour's "Outlines of Botany," Bentley's "Manual of Botany," Bentham's "British Flora," Lindley's "School Botany," Attfield's "Introduction to Pharmaceutical Chemistry," Gray's "Botany of Northern United States," Wood's "Class Book of Botany," Thoupson's "Organic and Inorganic Chemistry," Fowne's "Manual of Chemistry," Christison's "Materia Medica," "American Journal of Pharmacy," King's "American Dispensatory," Bigelow's "American Medical Botany." Any other work that members may deem desirable, if approved of by the Society at one of their monthly meetings, will be purchased for the library. The meeting then terminated with a vote of thanks to Messrs. Rendall and Heath for the use of the rooms, gas, &c., and for the attention which they have at all times paid to the interests and requirements of the Society. This vote of thanks was accompanied with a cheque for £5 5s. to recoup Messrs. Rendall and Heath for expenses which the Society had put them to during the session.

Two most excellent lectures were delivered during the session, under the auspices of the Society, one by Dr. Madden, on "The Distinguishing Peculiarities of Homœopathic Pharmacy," the other by Dr. Hamilton, on "The Botany of the Pharmacopœia," which were well received, each securing a good attendance. Dr. Hamilton having consented to the publishing of his lecture, it will form an

excellent companion to the New Pharmacopœia, and members cannot be too much obliged for the trouble which Drs. Madden and Hamilton took to prepare the lectures, and for the interest which they have at all times taken in the Society.

This constitutes the practical work of the session. It may not have been as fruitful in results as could have been wished, and thus briefly summarized does not convey an adequate idea of the labour involved, yet, on the whole, we may take courage, remembering that great things from little beginnings rise, and, considering how thoroughly and completely the time of each member is taken up with the pressing claims of business, we may not, must not, despise the day of small things.

The number of members who have not paid their subscriptions is six, and we have lost two members only from the Society during the session, one of which, our esteemed *confrère*, Mr. Harris, having become disqualified for membership, by becoming qualified for practice as a medical man.

Your Committee feel it their duty, before closing the second annual report, again to urge upon members the necessity of endeavouring, by all their efforts, to increase the strength of the Society numerically; and, further, to enhance its usefulness by contributing papers to be read at the meetings. In this the chief object of the Society will be promoted. It will conduce to the mutual advancement and welfare of all.

The following is the statement of the financial condition of the Society, the adoption of which was moved, seconded, and unanimously carried.

TREASURER'S ACCOUNT.

Dr.				£	s.	d.
1869.						
June 30.	To Cash at Bankers	...	...	125	8	9
	„ 43 Subscriptions, 21s.	...	...	45	3	0
	„ 4 Ditto 10s. 6d.	...	...	2	2	0
	„ Donation, per E. G. Gould, for Library	...	...	1	1	0
				£173	14	9
Cr.				£	s.	d.
1869.						
Dec. 21.	By Postages, small accounts, and sundries	...	...	6	6	11
1870.						
June 7.	„ Ditto ditto	...	...	5	13	0
	„ Gas, Rooms, &c.	...	...	5	5	0
	„ Printing	...	...	6	4	0
	„ Balance in hand	...	...	150	5	10
				£173	14	9

Showing a balance of £150 5s. 10d. in hand and when the £25 referred to in the Report, as voted for books and microscope, is deducted, the Treasurer will still have in hand, £125 5s. 10d.

HENRY TURNER, *Hon. Treasurer.*

Any communication to be addressed to the Hon. Secretary, Mr. H. S. ASHTON (Ashton and Parsons, 19, Wormwood Street, E.C.

A very miniature volume of twenty-four 32mo pages, entitled, "Plain Directions for the Treatment of Common Complaints," has reached us, from Messrs. Ashton and Parsons. We presume it is intended for gratuitous distribution, and it will be accepted as a useful gift by homœopathic families. Although it might be read through in fifteen

minutes, its use is chiefly as reference; and though allopaths would, of course, take exception to the directions for the treatment of diseases here given, we find that the best homœopathic authorities have been carefully followed.

Dentistry.

LEGAL INTERFERENCE.

A CORRESPONDENT—"a chemist and dentist"—in our June number sounded a rather alarming note when he called attention to certain clauses in the new Medical Act (Amendment) Bill, which he asserted would prevent any but qualified dentists from undertaking the extraction of a tooth even, except with the prospect of a heavy penalty. The Bill is now withdrawn and the danger passed; but as another will probably be brought forward next session, it will be only wise to look carefully into these matters, lest, in their anxiety to elevate the status of the profession, the framers of the Bill should steal a march upon a body of men who really do great service to the public in the provinces by undertaking these simple operations at a more moderate price than could be expected from the country surgeon. At the same time, we do not see that there was any immediate danger. The Act of 1858 distinctly stated in the 55th clause that "Nothing in this Act contained shall extend, or be construed to extend, to prejudice or in any way to affect the lawful occupation, trade, or business of chemists and druggists or dentists, or the rights, privileges, or employments of duly licensed apothecaries in Ireland." As far as we can see, and we have read the Bill through very carefully, the Amendment Act of 1870 did not contain any clause which would override the one we have quoted. It expressly stipulated that "nothing in this section shall prevent any person who lawfully holds a certificate of fitness to practise as a dentist, granted by the Royal College of Surgeons of England, from taking or using the title of certified dentist;" and so on, and this, by implication, seems to show clearly that the framers of the Bill kept in view the rights of chemists and druggists and dentists as guaranteed by the Act of 1858.

HOW THE LAW STANDS.

By the Act of 1858, as we have said, it is distinctly stated that the lawful occupation of chemists and druggists and dentists shall not be interfered with, and the proposed Bill of 1870, even if it had passed, would have left the matter just where it was; therefore, it may be assumed that any one practising dentistry or extracting teeth, has a right so to do, but he must not take the title of D.L.R.C.S.E. (Dental Licentiate of the Royal College of Surgeons, England). This degree, which is but little sought after, distinguishes (a) those who were members of the College of Dentists or the Odontological Society previous to the amalgamation of these two bodies, and (b) those who have gone through the curriculum and passed the examination prescribed by the College of Surgeons in accordance with the Act of 1858. There is a movement now on foot memorialising the College of Surgeons to institute a minor examination for the dental diploma to be open to those who were in practice before the time to which we have referred, but who were not members of either society. It has been decided to be lawful to describe oneself as a surgeon-dentist even, but the omission of the hyphen renders the person who thus describes himself as a surgeon liable to prosecution. Although, however, chemists are at liberty to extract teeth to any extent, we would remind them that, in the present advanced state of the science of pharmacy, extrac-

tion should not be resorted to until every other means has been tried to reduce the disease. It is an acknowledged principle in dentistry that it would be as rational to employ the guillotine for the cure of head-ache as the forceps for the relief of all the diseases commonly described as toothache. Most of these diseases are subjects for treatment medicinally; hence those who practice this speciality should carefully educate themselves on these points, and we hope in the future to give a few hints on the various diseases, which may be likely to be of service.

ANÆSTHETICS, THEIR RELATIVE SAFETY.

From a careful examination of the statistics of 209,893 cases, Prof. E. Andrews gives in the *Chicago Medical Examiner* the following estimate of the relative danger from different anæsthetics:

Sul. Ether	1 death to 23,204 administrations
Chloroform... ..	1 " 2,723 "
Mixed Chloroform & Ether	1 " 5,588 "
Bichloride of Methylene...	1 " 7,000 "
Nitrous Oxide	No death in 75,000 "

Messrs. Churchill have sent us a small book, just published, on "Irregularities and Diseases of the Teeth and their Treatment," being a series of papers which have already appeared in the *Lancet* and the *British Journal of Dental Science*. The author is Mr. Henry Sewill, a well-known dentist, and these papers, written especially for the use of those who do not devote themselves exclusively to the practice of dentistry, we may safely recommend to those of our readers who feel their deficiency in this respect.



PHYSIOLOGICAL EDUCATION.*

WE are glad to see that this excellent manual has reached a fourth edition, as it is to some degree a proof that an increased attention is being directed to the subjects on which it treats. Dr. Lankester cannot write an uninteresting book, and although in this one he has adopted the sectional arrangement for educational convenience, a plan which directly opposes itself to one's notion of reading for pleasure, yet the facts and explanations given are conveyed in a manner which at once attracts the attention. The author has done much to popularise the study of hygienic and dietetic philosophy among the non-medical readers of the country. It is a study of the highest importance to every one, and should take precedence of many other ordinary school subjects. That one-half of the world does not know how the other half lives is bad enough, but it is deplorable to think that perhaps not one per cent. of the population of the world knows how it lives itself, even as far as that knowledge might be acquired.

ECZEMA.†

Dr. Tilbury Fox has reprinted from the *Lancet* (of which paper we believe he is the editor) his Lettsomian lectures on the above subject. He has thoroughly examined the treatises of other eminent dermatologists on the subject, but expresses his preference for the views of Willan, a physician who practised at the commencement of the present century. Dr. Fox seems to consider that Erasmus Wilson has made too complex an arrangement of the various forms in which the disease presents itself, and he himself, following Willan, reduces the varieties to three. The treatment of the disease is fully described. The author's common sense plan

may be gathered from the following sentences, which introduce his third lecture:—

"Amongst the firmest of firm believers in the efficacy of drugs, I denounce the common practice of treating diseases of the skin in any active manner without a satisfactory diagnosis, and a consideration of related general or local conditions. If no fair diagnosis can be obtained, then I deny the right of any physician to inundate the system with such misused and potent remedies as arsenic and mercury."

COLOURS AND DYE WARES.*

The dyo trade has not a large special literature. In the production of colours chemistry has made some of her most striking successes, and perhaps obtained some of her richest pecuniary rewards. Every chemist ought to understand the art of dyeing, and every dyer ought to understand the science of chemistry. There is, we think, room for a good work, which shall be useful alike to the practical and theoretical student on this subject. Mr. Slater says, in his preface:—

"Books exist which profess to give such information, but it is for the most part either inaccurate, incomplete, or, at best, rather out of date. In fact, such works seem to me to be placed in a dilemma. If their authors be mere *littérateurs*, or even men of abstract science, they cannot furnish all the required particulars. If they are practical men they will not. Few persons are so generous as to reveal to the world the best and newest processes in their possession,—processes which alone, perhaps, enable them to cope with wealthier competitors."

This book does not profess to teach the art of dyeing, but what it does attempt it accomplishes most thoroughly. We have in its pages a complete encyclopædia of the *materia tinctoria*. The information given respecting each article is full and precise, and the methods of determining the value of articles such as these, so liable to sophistication, are given with clearness, and are practical as well as valuable. A matter is referred to in the preface which may have interest for many of our readers.

Mr. Slater says, "It is necessary to make brief allusion to a new discovery which, if substantiated, promises to create a revolution in the tinctorial world. Messrs. Walker, of Mansell-street, London, whilst experimenting upon certain African plants as materials for paper-making, profess to have come upon certain dyes which it is declared are equal to the coal-tar colours in purity and brillianee, and much superior in point of stability. The patentees assert that they can produce black, crimson, scarlet, and purple, in any shade, upon wool and silk, and good black upon cotton. The product is not yet in the market."

By the courtesy of Mr. Walker, we have ourselves seen these colours, but we should hesitate to describe them as equal to the anilines in purity and brillianee. They are patented, and we believe a company is being formed to introduce them to the trade. The patent consists in the use of an extract obtained from a plant which grows wild and abundantly in Jamaica, and which yields a yellowish colour. This acts as a mordant, and by combination with other colours the patentees declare that permanent results are obtained.

THE WEALTH OF NATURE.†

It is interesting and pleasant enough to read a book like this at this season, when the "wealth of nature" most palpably surrounds us. It is delightful to be a skilled botanist, and to be on intimate terms, as it were, with the flowers and fruits which nature so abundantly supplies; and it is a considerable practical benefit, which no one in his senses will deny, to be acquainted with the cultivation and the uses of these. Such is the object of this work. The author is eminent in natural history, and is perfectly at home among the many developments of the vegetable kingdom which he describes. Historical references, with regard to the cultivation of certain plants, abound throughout the pages of the book, and make it so much the more

* A School Manual of Health. By Edwin Lankester, M.D. Fourth edition. London: Groombridge.

† Eczema; its Nature and Treatment. By Tilbury Fox, M.D. London: Renshaw.

* The Manual of Colours and Dye Wares. By J. W. Slater. London: Lockwood.

† The Wealth of Nature. Our Food Supplies from the Vegetable Kingdom. Edinburgh: Nimmo.

interesting; and yet, after all, we feel unsatisfied with the book. Perhaps it is that the vastness of the subject prevents any author from doing full justice to it, and possibly the vague feeling of unsatisfaction to which we have alluded may be a tribute to the author's skill. As we understand the preface, it is, to some extent, Mr. Montgomery's intention to give a series of works on this subject. This volume is intended to show the wealth of nature in the vegetable kingdom, and we presume two others would present respectively the animal and mineral divisions. It is a grand subject, and one which covers the fields of all the sciences, and it is undoubtedly the disparity between the grand ideas which such a title suggests, and a merely pleasantly written, gossipy, albeit instructive volume like this, that leaves a shade of regret as we finish our examination of it.



SAMUEL'S POCKET PENCIL LIGHT.

SINCE the day when, to use a paradoxical expression, tinder-boxes exploded, the world has been tolerably satisfied with its lucifers. One, perhaps, in twenty millions occasions an accident; but this is looked upon as a moderate toll exacted from us, which we pay for the sake of the convenience we obtain. Messrs. Samuel and Peace, of Liverpool, however, on handsome show-cards, make the startling announcement, "matches superseded," and though we doubt their ability to accomplish this object, we have no doubt that their invention will attain considerable popularity. An exact imitation of a pencil-case, in German-silver or aluminium gold, is supplied with tapers instead of leads, and these, by mere friction with a rough surface, can be re-lit any number of times. The taper is pushed forward by the usual motion, and when it is exhausted can be replaced by a new one. These cost a penny each, and one is said to be sufficient for from twenty to thirty lights. The greatest advantage of these lighters is their perfect safety in the pocket. The advertisement, on another page, gives fuller particulars.



CALVERT'S PREPARATIONS.

MESSRS. CALVERT have added to their toilet preparations of carbolie acid, a very superior tooth powder. It is quite pleasant to use, leaves a fresh and pure taste in the mouth, and is, we doubt not, most beneficial in the prevention of decay. Some "floating soap," manufactured by the same firm, of which they have sent us a sample, is not, we think, creditable to them. It certainly floats on water, being made light and porous; but we fail to see much advantage in this. It is not very neatly turned out, and both in appearance and use, contrasts unfavourably with the carbolie soaps of this manufacture with which we have been familiar before.

TURNER'S CHOCOLATE POWDER.

ALTHOUGH it would be impossible to say anything new of any of the preparations of cocoa, whose name is legion,

which so often come before us, we can have no hesitation in placing this among the very best. It is prepared by Messrs. Turner and Co., the homœopathic chemists, evidently with great care to obtain a rich flavour, and at the same time to produce a perfectly wholesome food.

Corner for Students.

CONDUCTED BY RICHARD J. MOSS.

The chemical formulae employed in this section are based upon the new system of atomic weights, unless the use of the older system is specially indicated. In the *British Pharmacopœia* the symbols corresponding to those adopted here are printed in heavy Clarendon type. The new editions of Fownes's *Manual of Chemistry*, and Attfield's *Chemistry: General, Medical, and Pharmaceutical*, supply the data required for calculations, and are recommended as text-books.

QUESTIONS.

First Division.

I. ORGANIC ANALYSIS.—In a determination of nitrogen the gas evolved by the ignition of .725 of a gramme of an organic compound with soda-lime, was passed through 20 cubic centimetres of a standard solution of sulphuric acid, containing two grammes of sulphuric acid (H_2SO_4) in 100 c. c. After the operation it was found that the neutralisation of the acid required 16.4 c. c. of a standard solution of sodium hydrate, containing 1 gramme in every 100 c. c. What was the percentage of nitrogen in the compound?

II. CHEMICAL TOXICOLOGY.—Describe a method for the detection of strychnine in organic mixtures. By what reactions is this alkaloid distinguished from brucine?

III. SODÆ PHOSPHAS, *B.P.*—Explain the official process for the preparation of this substance, and express the reactions in the form of symbolic equations.

IV. SILICIC ACID.—Give a short account of the principal properties of this acid and of the silicates. How is the decomposition of silicates not decomposed by acids effected?

V. SPECIFIC GRAVITY.—In what proportion, by weight, should gold and copper be mixed in order to produce an alloy having a sp. gr. of 17.25? (Sp. gr. of gold 19.35, copper 8.85.)

Second Division.

I. CALCIUM CHLORIDUM, *B.P.*—Why is it stated in the *Pharmacopœia* that in preparing this substance some solution of chlorinated lime and slaked lime should be added to the mixture produced by neutralizing hydrochloric acid with calcium carbonate? Express the reactions involved symbolically.

II. POTASSII BROMIDUM, *B.P.*—Explain the official process for the preparation of this substance, and give symbolic equations expressive of the reactions.

III. SULPHUR.—Describe the changes which sulphur undergoes by the application of different degrees of heat.

IV. GAS VOLUME.—A litre of oxygen at 0° C., and 760 m. m. barometric pressure, weighs 1.43028 gramme, how much should it weigh at 743 m. m. pressure?

V. SPECIFIC GRAVITY.—A piece of quartz containing gold weighs 11.5 ounces, and has a specific gravity of 6.27, how much gold (in ounces) does it contain? (Sp. gr. of gold 19.35, quartz 2.6.)

ANSWERS.

First Division.

I. ORGANIC ANALYSIS.—There was 9.382 per cent. of nitrogen in the compound. The ignition of the organic compound with soda-lime causes all its nitrogen to be evolved in the form of ammonia, which, passing through the acid, neutralizes a portion of it, producing ammonium sulphate. Now, as 100 c. c. of the acid solution contain 2 grammes of sulphuric acid, a molecule of which (98) is equal to two atoms of nitrogen (28), it is evident that the equivalent in nitrogen of the corresponding quantity of the sodium hydrate solution, i. e., 200 c. c., is found by the following proportion:—

$$98 : 2 = 28 : x \therefore x = .57143.$$

The 20 c. c. of acid solution employed would require for neutralization $\left(\frac{200}{5} =\right)$ 40 c. c. of the sodium hydrate solu-

tion; but as only 18 e. e. of the latter solution are found necessary, it follows that the quantity of ammonia absorbed is equal in neutralizing power to $(40 - 18 =) 22$ e. e. of this solution, or .062857 of a gramme of nitrogen, according to the proportion—

$$200 : 22 = .57143 : x \therefore x = .062857.$$

Then to find the percentage we have the proportion—

$$.67 : 100 = .062857 : x \therefore x = 9.382.$$

II. CHEMICAL TOXICOLOGY.—The following process may be employed for the examination of the contents of the stomach in a case of suspected poisoning by hydrocyanic acid. If the matter to be examined is not strongly acid, add tartaric acid, then distil with the aid of a water bath and a Liebig's condenser; collect about 15 e. e. of the distillate in a flask, and divide this into two equal portions. To half of one of these portions add a solution of potassium hydrate, and then a solution of ferrous sulphate with a little ferric chloride; if on adding hydrochloric acid to this mixture a blue or bluish-green precipitate is formed, hydrocyanic acid is present. As a confirmatory test, add to the remaining quarter of the distillate an excess of ammonium sulphide, then a little ammonia, and warm the mixture until the excess of ammonium sulphide is expelled, then acidify with hydrochloric acid, and add ferric chloride; if a blood-red coloured solution is obtained, hydrocyanic acid is present. An approximate determination of the quantity of hydrocyanic acid present may be made by continuing the distillation until all the acid has passed over, adding half of this distillate to the remaining half of the first distillate obtained, and again distilling this liquid with a little powdered borax to separate any hydrochloric acid that might be present. On adding silver nitrate and nitric acid to the distillate a precipitate of silver cyanide is obtained, and should be collected, washed, dried at 100° C., and weighed. As only half of the acid present was precipitated, the quantity of silver cyanide found should be doubled; one molecule of this salt ($\text{AgCN} = 134$) represents one molecule of hydrocyanic acid ($\text{HCN} = 27$).

III. SUGAR.—An aqueous solution of glucose may be readily distinguished from one of sucrose by the following test:—To both of the solutions add a tolerable excess of a solution of potassium hydrate, and a few drops of a dilute solution of cupric sulphate—or better, cupric tartrate—and then boil for ten or twenty minutes. It will be found that scarcely any perceptible change has taken place in the sucrose solution, which retains its blue tint, whilst a yellowish-red precipitate, consisting of cuprous oxide (Cu_2O), will have been produced in the glucose solution, which will also be left nearly colourless.

IV. OXALIC ACID.—Oxalic acid ($\text{H}_2\text{C}_2\text{O}_4$) is found in many plants, most frequently in combination with potassium or calcium; it is produced artificially by the oxidation of sugar with nitric acid, and by heating sawdust with caustic alkali. Oxalic acid is soluble in water and in alcohol; from the former liquid it separates in crystals derived from an oblique rhombic prism, in combination with two molecules of water. In this state it melts at about 98° C., and loses its water readily; the dry acid sublimates at 165° C. in slender white needles, at the same time a small portion of it is decomposed. At higher temperatures the decomposition is complete, the products being carbon dioxide and formic acid; the latter is resolved into carbon, monoxide, and water. Oxalic acid may be crystallized from hot nitric acid, but by continued boiling in this acid it is decomposed into carbon dioxide and water. The oxalic radical, which has never been isolated, is bivalent, and forms neutral and acid salts; it also forms a group of hyperacid salts, of which the "salt of sorrel" is a good example, $\text{KH}_3(\text{C}_2\text{O}_4)_2$. Nearly all the oxalates, excepting those of the alkali metals, are insoluble in water but soluble in dilute acids; ferric oxalate is freely soluble in water. All the oxalates are decomposed by heat. When the oxalates of the easily reducible metals are heated, carbon dioxide is evolved and the metal is left in the metallic state; the oxalates of the less reducible metals, whose carbonates are decomposed by heat, evolve carbon monoxide and carbon dioxide, and the metal is left as oxide. The oxalates of these metals whose carbonates are not decomposed at moderately high temperatures, yield, when heated, carbon monoxide and a carbonate of the metal. When an oxalate is heated with

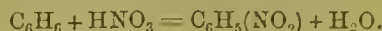
concentrated sulphuric acid, carbon monoxide and dioxide are evolved; the former gas burns with a blue flame when ignited. Solutions of calcium salts produce, even in highly dilute solutions of oxalates, a white precipitate of calcium oxalate, which is insoluble in acetic acid.

V. SPECIFIC GRAVITY.—100 parts of the alloy consist of 84.717 of gold and 15.283 of copper. The proportion of gold present is calculated from the given data by the following formula:—

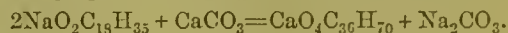
$$100 \frac{(16.33 - 8.85) 19.35}{(19.35 - 8.85) 16.33} = 84.714.$$

Second Division.

I. ARTIFICIAL OIL OF BITTER ALMONDS.—The substance known in commerce as artificial oil of bitter almonds is nitrobenzene, $\text{C}_6\text{H}_5(\text{NO}_2)$. It is prepared by adding benzene in small quantities at a time to warm fuming nitric acid; the nitrobenzene, which separates on cooling, is subsequently washed with water. The reaction is represented by the following equation:—



II. SOAP.—The principal constituents of hard soaps are sodium stearate ($\text{NaO}_2\text{C}_{18}\text{H}_{35}$), sodium palmitate ($\text{NaO}_2\text{C}_{16}\text{H}_{31}$), and sodium oleate ($\text{NaO}_2\text{C}_{18}\text{H}_{33}$). When these substances are brought in contact with the calcium and magnesium salts of hard water, insoluble stearates, palmitates, or oleates of calcium or magnesium, as the case may be, are produced, and constitute the well-known flocculent precipitate. The formation of these substances is represented by the following equation, taking calcium stearate for example—



Pure water does not dissolve the alkaline stearates, palmitates, and oleates, without decomposition, the neutral salts being resolved into acid salts, which are precipitated, such as acid sodium stearate, $\text{NaO}_2\text{C}_{18}\text{H}_{35}$, $\text{O}_2\text{C}_{18}\text{H}_{36}$, and a hydrate of the alkali metal which remains in solution; so that on mixing soap with hard water a precipitate continues to separate even after the salts which constituted the hardness have been decomposed.

III. VAPOUR DENSITY.—The following is the method usually adopted for ascertaining vapour densities. About 100 grains of the substance are introduced into a small glass globe about three inches in diameter, having a neck drawn out to a fine point. The globe is then heated in a bath of boiling water or oil; when vapour ceases to be evolved, the neck of the flask is closed with a blowpipe flame, and the flask when cool is weighed. The point of the neck is then broken off below the surface of mercury, which fills the globe if the expulsion of air has been complete; if not the volume of the residual air is ascertained by pouring the mercury into a graduated vessel, by which means the capacity of the globe is also ascertained; the globe is then weighed filled with air. The necessary corrections for temperature and pressure being made, the weight of the vapour contained in the globe divided by the weight of an equal volume of air or of hydrogen gives the comparative density of the vapour. As the vapour densities of compounds referred to hydrogen are found in nearly all cases to equal half their molecular weights, it follows that the knowledge of the vapour density of a compound is of great importance in ascertaining its molecular formula: for example, benzene might be represented by the formula CH , in which case its theoretical vapour density would be $\left(\frac{12+1}{2} =\right) 6.5$; but the vapour density has been found by experiment to be six times this number, or 39, consequently it is represented by the formula C_6H_6 .

IV. DAVY'S SAFETY LAMP.—The peculiar advantages of Davy's safety lamp are due to the fact that the wire gauze which surrounds the flame of the lamp, being a good conductor of heat, prevents the gas outside the lamp from becoming heated to its kindling point, which in the case of fire damp is unusually high.

V. SPECIFIC GRAVITY.—The specific gravity of the mixture is .923. The volume of the linseed oil is $(10 \times .9 =) 9.3$, and that of the olive oil $(8 \times .915 =) 7.32$, these numbers added together equal the volume of the

mixture, viz., 16.63, which, divided by its weight, gives the specific gravity of the mixture $\left(\frac{16.62}{18} = \right) \cdot 923$.

Prizes.

The first prize for the best answers to the questions of the First Division printed in our July number, has been awarded to

E. NUTHALL (A.E.I.), Bank Plain, Norwich,
Who obtained the second prize in February.

The second prize for the best answers to the questions of the Second Division has been awarded to

ALICK S. BETTS, 10, High Street, Crediton, Devon.

Marks awarded for Answers.

First Division.

	I.	II.	III.	IV.	V.	E.	Total.
A. E. I. (1st prize) ..	6	5	4	7	9	3	34
Otho ..	5	5	5	6	9	3	33
J. S. E. ..	5	8	5	6	0	3	27
R. W. Griffith ..	0	6	4	5	8	3	26
A. Fraser ..	7	5	5	4	0	3	24
J. W. Smith ..	7	5	4	5	0	3	24
H. Forster ..	7	5	4	4	0	3	23
J. Young ..	4	5	4	6	0	3	22
J. H. Watson ..	0	5	5	5	0	3	18

Second Division.

	I.	II.	III.	IV.	V.	E.	Total.
A. S. Betts (2nd prize) ..	5	5	6	5	4	3	28
F. W. Fletcher ..	5	3	6	5	4	3	26
W. B. Baron ..	5	2	4	5	4	3	23
P. L. ..	4	3	4	5	4	3	23
A. Weddell ..	5	3	4	5	4	1	22
J. Edgill ..	5	3	5	5	2	1	21
P. C. ..	4	3	4	5	4	1	21
J. H. Elmitt ..	5	2	3	5	4	1	20
C. H. Fleming ..	0	5	5	5	3	2	20
F. H. ..	2	2	5	5	3	2	19
W. J. Smith ..	5	3	1	5	4	1	19
C. B. L. ..	4	0	3	5	4	2	18
W. Laugher ..	5	2	3	5	0	3	18
"Velo discere" ..	0	4	3	5	4	2	18
S. T. Severs ..	4	2	1	4	4	1	16
Spes ..	5	2	0	4	4	1	16
W. Mc I. ..	2	0	1	5	3	2	13
J. Greensill ..	0	0	0	5	4	1	10

TO CORRESPONDENTS.

* * All questions forwarded to us for publication in this "Corner for Students" should be accompanied by the answers which the propounders believe to be correct. Communications should include the names and addresses of the writers; those which reach us after the first day of the month will be disregarded.

Prizes.—The students to whom prizes are awarded, are requested to write at once to the publisher, naming the book they select, and stating how they wish it forwarded.

Otho.—I. It is difficult to obtain a correct result by a method involving such an amount of calculation as yours.

J. S. E.—I. The calculation of the percentage of ammonia was quite superfluous.

R. W. Griffith.—I. You evidently misunderstood this question.

J. W. Smith.—III. From the manner in which you use the word "ferrie," we presume you meant "cupric."

H. Forster.—IV. The oxalates of silver, mercury, and copper yield the metals on ignition, the oxalates of zinc and magnesium yield oxides.

J. H. Watson.—I. Your second result is obviously absurd. Thanks; we were not aware of it before.

F. W. Fletcher.—It means "more than," but some persons use it to signify "nearly, but not quite."

P. C.—Good for a first attempt.

J. H. Elmitt.—V. You should give details of the calculation sufficient to show how the result was obtained.

C. H. Fleming.—I. You allude to the essential oil. V. You certainly succeeded in making this simple calculation very complex.

F. H.—I. Formulae incorrect. V. You transpose the words "volumo" and "weight."

C. B. L.—II. Carbonates are not necessarily present in soap. V. Your method is quite correct.

W. Laugher.—V. A moment's reflection should have convinced you that it was impossible that the specific gravity of such a mixture could be greater than that of either of its constituents.

"Velo discere."—I. See remark to C. H. Fleming.

Spes.—III. The vapour density to which you refer is only theoretical.

W. Mc I.—You should confine yourself as much as possible to the subjects of the questions. III. You cannot have understood this question.

V. An error in the third decimal place is scarcely excusable in so simple a calculation.

Books offered as First Prizes.

Atfield's *Chemistry: General, Medical, and Pharmaceutical.* (Van Voorst.)

Brooke's *Elements of Natural Philosophy.* (Churchill.)

Conington's *Handbook of Chemical Analysis; with Tables of Qualitative Analysis adapted to the same.* (Longmans.)

Eliot and Storer's *Manual of Inorganic Chemistry.* (Van Voorst.)

Fownes's *Manual of Elementary Chemistry.* (Churchill.)

Fresenius's *Qualitative Analysis.* (Churchill.)

Galloway's *Qualitative Analysis.* (Churchill.)

Ganot and Atkinson's *Elementary Treatise on Physics.* (Longmans.)
Garrod's *Materia Medica; with Modern Chemical Notation.* (Watson.)
Noad's *Chemical Analysis, Qualitative and Quantitative.* (Reeve.)
Northcote and Church's *Qualitative Analysis.* (Van Voorst.)
Odling's *Outlines of Chemistry.* (Longmans.)
Royle and Headland's *Materia Medica.* (Churchill.)
Wilkinson's *Chemistry for Students.* (Clarendon Press.)
Barff's *Introduction to Scientific Chemistry.* (Groombridge.)
[Any other scientific book that is published at a price not greatly exceeding half-a-guinea may be taken as a first prize.]

Books offered as Second Prizes.

Bloxam's *Laboratory Teaching.* (Churchill.)
Church's *Guide for Pupils in Agricultural Chemistry.* (Van Voorst.)
Galloway's *First Step in Chemistry.* (Churchill.)
Gill's *Chemistry for Schools.* (Watson.)
Hofmann's *Introduction to Modern Chemistry.* (Watson.)
Huxley's *Lessons in Elementary Physiology.* (Macmillan.)
Oliver's *Lessons in Elementary Botany.* (Macmillan.)
Orme's *Introduction to the Science of Heat.* (Groombridge.)
Potts's *Elements of Euclid.* School Edition. (Longmans.)
Roseoc's *Lessons in Elementary Chemistry.* (Macmillan.)
Wormell's *Elementary Course of Mechanics.* (Groombridge.)
Wurtz's *History of Chemical Theory.* Translated by Watts. (Macmillan.)
[Any other scientific book which is sold for about five shillings may be taken as a second prize.]



LONDON CHEMISTS' ASSOCIATION.

ON Thursday, June 9th, Mr. WILLMOTT occupying the chair, a paper was read by Mr. Peal on the Tinctures of the Pharmacopœia.

Mr. PEAL said that he had taken up a subject on which at different times a great deal had been written; he intended to confine his remarks to that which had been the chief topic of discussion—tincture-making. He first pointed out the great want of uniformity in the tinctures of the Pharmacopœia. There were forms for sixty-five given, forty-eight of which were simple tinctures—that is to say, those in which the medicinal virtues of a single plant were extracted by either proof or rectified spirit or ether, by means of maceration, percolation, or both combined. The remaining seventeen were compound, containing in some instances several ingredients, and were also prepared in similar ways. Two of the latter, though, aloes and quina, were so slightly compound that they might also be classed with the simple tinctures. The Pharmacopœia, Mr. Peal pointed out, directed these sixty-five tinctures to be so prepared that the active ingredients were contained in no less than fifteen different proportions; there being one tincture in which it is contained in the proportion of 1 in 2, two in which it appears as 1 in 4, four of 1 in 5, thirty-three of 1 in 8, seven of 1 in 10, two of 1 in 13½, five of 1 in 20, two of 1 in 27, two of 1 in 40, one of 1 in 60, two of 1 in 80, one of 1 in 96, one of 1 in 213, and one of 1 in 240. This irregularity of proportion was considered by some to be accounted for by the desire of the compilers of the Pharmacopœia to obtain uniformity of dose; but there were no less than eight maximum doses given for these sixty-five tinctures, ranging from mxxv to one ounce. There was one of mxxv , eight of mxx , nine of mxxx , two of mxi , fourteen of vj , twenty-six of ij , one of iv , one of viii . Surely this want of uniformity, he thought, might be obviated in some way or other. He could see little objection to a uniform strength; it would be a great convenience to physician and chemist. The doses of course would require re-arrangement; but if all the tinctures contained their active ingredients in the proportion of 1 in 8, or 1 in 10, there would be little difficulty in prescribing, as in a moment it would be easy to calculate what amount of tincture to order. Mr. Peal then proceeded to show that as a rule, in those tinctures stronger than 1 in 8, there was a waste of herb, and in those weaker than 1 in 10 a waste of spirit, an unnecessary amount being used. He next entered fully upon the different plans of making tinctures. He first noticed the plan, much adopted in the Pharmacopœia, of macerating and then percolating; and also Mr. Squire's more detailed plan, given in his "Companion to the Pharmacopœia." He objected very strongly to the use of two or three different vessels in manipulating, and pointed out a method by which nearly all the tinctures might be

made in one vessel; the percolator itself, maceration and percolation combined, could not be regarded as a perfect plan. It had been before remarked, that substances which had been subjected to maceration would not allow of proper percolation.

The CHAIRMAN thought that uniformity of dose could not be attained; uniformity of strength might be. Could there, therefore, be any great objection to attempting it, for, as Mr. PEAL said, a medical man would know the strength of the preparation, which was certainly not the case at present? Mr. WILLMOTT alluded to the homœopathic plan of making tinctures with fresh herbs, and of a definite strength and spirit value. Mr. TAUBMAN spoke of the many ways of preparing tinctures. He thought there was not the slightest occasion for pressing the marc in several instances, as the spirit could be so easily displaced. He made many practical remarks upon the Pharmacopœia tinctures, suggesting it would be invariably found, in making Tinct. Benzoin Co., that too much spirit was ordered. Nearly all the tinctures were prepared from vegetable matter. He should like to see those of minerals under some other name. Mr. BEEDZLER said that undoubtedly there would be much difficulty in obtaining either uniformity of strength or dose; but could not something be done to obtain them? He thought the tinctures might be brought under four heads, both as regards strength and dose. Mr. BEYNON pointed out that in making Tr. Zingib., maceration was ordered, but not in making Tr. Zingib. Fort., unless it was considered to be macerated with the first quantity of spirit used, which was added to the ginger in the percolator. Ginger in fine powder was ordered in the one case, but in coarse powder in the other. Would it not have been better to have made the weaker tincture from the stronger? Fluid extract would have been a more appropriate name for Tinct. Zingib. Fort., in making which, it was better to stir up the ginger with about three-fourths the quantity of spirit ordered, and pour the mixture into the percolator. He did not believe in maceration unless in the percolator; as Mr. Peal had noticed some physical effect was produced, which prevented the substance operated upon from being properly percolated afterwards. A vote of thanks to Mr. Peal for his able paper, and one to the Chairman, terminated the proceedings of the meeting.

On Thursday, June 16th, Mr. BEEDZLER in the chair, Mr. BELL read a paper on The Syrups of the Pharmacopœia. He said the manufacture of syrup was looked upon as a sweet employment for the young chemist, and with sundry dustings and powderings, formed the beginner's first lessons in the art and mystery of a chemist and druggist. Before starting to make syrups, Mr. Bell remarked that care should be taken to obtain pure sugar, which was sometimes difficult. The present form for making simple syrup was just right, and better than the London form. Syr. Aurant. was an improvement; by making it with the tincture we get rid of a lot of matter which made the syrup turbid and fermentable. The boiling process, too, was done away with. Syr. Aurant. Flor. was a new syrup in the Pharmacopœia; it was much used for flavouring. With regard to Syr. Ferri Iod., an elegant preparation of a protosalt of iron, everyone had something to say, but there was no better plan for making it than that given in the Pharmacopœia. Care and "gumption" were required; it was better, though, to add the solution to hot syrup. Syr. Ferri Phosph. was now to the Pharmacopœia. Much of the dilute phosphoric acid, Mr. Bell remarked, contained nitric acid, which caused the syrup to become reddish on keeping. Syrups containing phosphoric acid were now as numerous as days in the year, much to the annoyance of chemists; everybody had a pet one of their own, but it would be well to try not to add to their number. With regard to Syr. Hemidesmi, it had been shown that the heat used in infusing the root and making the syrup drove off most of its aroma; it was seldom prescribed, and was probably useless. Syr. Limonis thickened and deposited; might it not be prepared by dissolving citric acid and aromatizing with a strong tincture of the peel, as in the case of Syr. Aurant? Syr. Mori was a nice syrup to have to make, and that was all he could say about it. Syr. Papav. was still made with boiling water—a great mistake. Cold water would not extract the starch, and this, therefore, would not trouble one, as at a later period of the manufacture. The quantity of spirit ordered for this syrup was not

sufficient for the purpose. Syr. Rhamni was next noticed; it was not a fashionable remedy, but one much used in some parts for children and dogs. With regard to Syr. Rhei, it might have been made from Tinct. Rhei; there were no directions for saving the spirit in this case, as in Syr. Papav. Syr. Rhodod. was a syrup giving a good colour. Such could not be said of Syr. Rosæ Gall., which was a nuisance to everybody. Syr. Scillæ, an old remedy, was replaced in the present Pharmacopœia. Syr. Sennæ was still official, but wonderfully altered; manna and treacle were now omitted. The spirit used for getting rid of albuminous matter should be added by degrees whilst stirring, as the cathartin of senna is insoluble in spirit, and if thrown down with the albumen might not be redissolved. Syr. Tolutan he had tried many plans for making. Mr. BROWNEN suggested that the balsam should be dissolved in about its weight of spirit, poured into boiling water, and kept warm for ten minutes or so; it filtered bright, and had more of the tolu aroma than could be obtained by half-an-hour's boiling. Syr. Zingib. was a strange preparation, strange in form and colour. Why was not the quantity of essence of ginger for a pint of syrup given?—a little ginger more or less would not have hurt any one; if the tincture were added to hot syrup a clearer preparation is obtained. Mr. BELL concluded by saying that the syrups of the Pharmacopœia were as a whole greatly improved; in fact, our Pharmacopœia was one that the English nation need not be ashamed of. It neither catered for Italian warehousemen, as the Paris Codex did, nor pandered to quacks. Several syrups were either colouring or flavouring agents; such ought not to be increased in number. Perhaps, in a supplement, or the next edition of the Pharmacopœia, ferus would be inserted for Syr. Ferri Phosph. Co., and Syr. Ferri, Quinæ, Strychniæ Phosphatum, both of which were much prescribed.

QUEKETT MICROSCOPICAL CLUB.

The fifth annual meeting of this Club was held on Friday evening last, July 22nd, at University College, Gower-street, Peter Le Neve Foster, Esq., President, in the chair. According to the annual report of the Committee, which was read, the Club still maintains its popularity and success. It numbers over 500 members, and meets for the prosecution of microscopical inquiry and discussion twice a month throughout the year. Mr. Peter Le Neve Foster, in vacating the presidential chair which he had so ably filled during the past year, delivered his valedictory address, in which he called attention to the progress of microscopical knowledge of late years, and directed the attention of the members to various open questions in connection with the subject, which he considered they might undertake the investigation of with pleasure to themselves and advantage to the world at large.

Professor Lionel S. Beale, M.B., F.R.S., was elected President for the ensuing session, and Messrs. Arthur E. Durham, F.R.C.S., Peter Le Neve Foster, M.A., Henry Lee, F.L.S., and Dr. Robert Braithwaite, F.L.S., were elected Vice-Presidents; while Messrs. Albon, T. W. Burr, F.R.A.S., Witham M. Bywater, and Charles F. White, were elected to fill four vacancies on the Committee. The proceedings then terminated in a *conversazione*.

AMERICAN PHARMACEUTICAL ASSOCIATION.

The following circular has reached us and we believe a similar one has been addressed to many of the large firms in England:—

Baltimore, June 1st, 1870.

Dear Sir,—The Exhibition of Objects relating to Pharmacy and the Collateral Sciences, has become a prominent and interesting feature of the annual meeting of this Association.

As an annual exponent of the progress of chemical and pharmaceutical industry, the Exhibition is replete with interest and instruction to the Pharmacist; while to the manufacturer and wholesale dealer the occasion affords an excellent opportunity to make his name and his goods known to the trade.

The next meeting of the Association will be held in this city, commencing Tuesday, September 13th, 1870. The importance of Baltimore as a commercial centre, in connection with the fact that it is closely connected with Europe by steamers, and by rail with all parts of the country, it is confidently expected will attract a large attendance. Exhibitors, therefore, will find it to their interest to make a liberal display. A notice of the articles exhibited will be published in connection with the annual proceedings.

All engaged in the manufacture of Pharmaceutical goods are cordially invited to send specimens of their productions. It is very desirable that there should be a more ample representation of crude drugs than has been the case at previous Exhibitions. Importers and jobbers are earnestly requested to contribute of their abundance to this department. Living specimens of medicinal plants would add greatly to the attractiveness of the Exhibition; residents of the city and vicinity having such in their possession would confer a great favour on the Association by granting their use during its session.

Articles for exhibition should be delivered, free of expense, to Sharp and Dohme, corner of Howard and Pratt streets, on or before September 1st, accompanied with invoice and bill of lading, with a description of the articles sent.

Articles sent for exhibition will be returned, sold, donated to the Maryland College of Pharmacy, or otherwise disposed of, as their owners may direct.

Should you wish to exhibit any articles, please notify the chairman of the local committee, without delay, stating what kind of goods you desire to send, the space required, and whether on floor, table or wall.

Yours respectfully,

J. FARIS MOORE,

Local Secretary, A. P. A.

J. FARIS MOORE, Chairman,
JOS. ROBERTS,
W. S. THOMSON,
LEWIS DOHME,
J. F. HANCOCK,
R. SAPPINGTON, M.D.,
A. P. SHARP,

} Local Committee.

LAW AND POLICE.

WHOLESALE ROBBERY BY A CHEMIST'S ASSISTANT.

JOSEPH GARDNER, *alias* Joseph Grassby, of Barton-on-Humber, a gentlemanly-looking young man, was charged with stealing a gold ring, valued at £2 4s, the property of Edmund Bland. Supt. Vickery said that on Saturday last the prisoner was apprehended on another charge. He was then ordered to turn out his pockets, and amongst the contents was a gold ring. On Sunday morning witness received information from prosecutor that he had lost a gold ring from his bedroom. On showing him the one taken from prisoner's pockets, he identified it. Edmund Bland said that he was an assistant at Mr. Mason's grocery shop, and lived at Mr. Mason's house, at 53, St. Thomas's-street. Prisoner was an assistant in the chemist's shop, and had to go through his (Bland's) bedroom to get to his own. He missed the ring on Sunday, the 10th of July. The one produced was the same, but the stone, on which were his initials, had been removed. In reply to the Bench, prisoner said that he had no questions to ask, and would reserve his defence. Prisoner was further charged with obtaining a situation as a chemist's assistant by means of a false character. Arthur Mason said that prisoner entered his employ on the 8th of November, 1869, as a chemist's assistant, and to take the management of his business during his (witness's) absence. Prisoner gave him a reference, and the following character was received in reply to a letter forwarded to the address given:—"Mr. Mason, Weymouth. Dear Sir,—To your letter bearing date October 30, which has just come to hand, I have much pleasure to inform you that during the long time Mr. Gardner has lived with me I have found him a very steady, sober, and industrious young man, of very obliging manners and gentlemanly appearance, and do not doubt but what he will in every respect suit you well, as he is a very competent and trustworthy person. Yours

very truly, Henry Brewer, 45, Penton-street, Barnsbury-road, London, November 1, 1869." In consequence of this character, witness engaged him, and he had been in his employ ever since. He had suspected prisoner of dishonesty for some time, as the receipts in the shop scarcely ever varied, whether there was much business or not. He received a letter from a Mr. Langford, on Wednesday, which informed him that prisoner had obtained his situation by means of a forged character. He (Mr. Mason) had paid prisoner two quarters' salary, and another one was almost due. On Saturday night he accused him of having obtained his situation by means of a forged character, when he acknowledged that he had done so. Mr. John Brown Langford, a chemist, of Wellington, Somerset, said that prisoner came into his service as an assistant in July, 1869, and left in the beginning of October. He (witness) wrote to Mr. Brewer, of Penton-street, and obtained a similar answer to that produced by prosecutor. He discharged prisoner for stealing money, but did not prosecute him, as he should have had to leave his business. Witness detected him by passing marked money into the shop, which was afterwards found in prisoner's pockets. Supt. Vickery said that the authorities at Scotland-yard did not know of such a man as Brewer, of 45, Penton-street. He therefore asked for a remand. Granted.—Another charge was then gone into against prisoner for stealing 14s., the property of Arthur Mason. Prosecutor that he marked £1 6s. 6d. worth of silver on Saturday night, and had it passed into the shop. As the shop was being shut, he asked prisoner if he had been busy, when he replied that he had not—in fact, it had been one of the slackest nights since he had been there. After closing time, witness and the superintendent of police entered the shop and accused prisoner of having obtained his situation by means of a forged character. He acknowledged that he had done so, and he (witness) then ordered him to turn out his pockets, in which were eight sovereigns and some silver, amongst which were two of the marked half-crowns. He was then given into custody. The money had been marked only about half an hour before the shop was closed. The other marked 9s. were found hid away in a stamp drawer. Prisoner accounted for this by saying that he put it there because a man came for a truss and had not bought it right out. He accounted for having the marked 5s. in his pockets by saying that he had given change with some of his own money, and had taken the marked money to reimburse himself. When given into custody, he said, "Oh, let me off, and I will go abroad." The takings in his shop had been £2 or £3 less a week since prisoner had been there. Witness believed that he had lost more than £70 during the time prisoner had been in his service, and that sum had been found in bank notes in his box. Prisoner, who reserved his defence, was further charged with stealing £78 in cash, six bottles of scent, three of medicine, two packets of pills, two jars of pomatum, two fancy boxes, five fancy bottles, one tap and spills, glass tube, packet of court plaster, part of a bottle of musk, three suspenders, chamois leather, three sponges, eard ease, packet of tea, four glass syringes, patent syringe, two sponge bags, four tooth brushes, shaving brush, lances, hair and nail brushes, soap, box of cigars, combs, hair dye, tooth paste, friction gloves, clothes brushes, books, and chest preserver. Remanded on this charge also.

"DAMAGES AGAINST A DRUGGIST."—KELLY AND WIFE v.

TRILFIELD.

This was a case in which the plaintiff and his wife sought to recover damages from a druggist in Liverpool, as solatium for injuries sustained by Mr. Kelly in consequence of the defendant administering to Sarah Kelly some noxious drug, by which her health was hurt and destroyed. Dr. Commins was for the plaintiff, and Mr. M'Oubrey for the defendant, who, in answer to the declaration of the plaintiff, had entered a plea of not guilty. The case for the plaintiffs was that on the evening of the 20th March, 1869, Mrs. Kelly went to the defendant's shop and asked for half an ounce of castor oil, for which she took a small glass. She asked him to put in some water to prevent the oil sticking to the glass, but instead of doing that he put in some peppermint. Mrs. Kelly then told him that she did not want peppermint, upon which he emptied the glass, and taking another bottle from the shelf poured in something which appeared to be pure water. He then poured in the castor oil, and covered the glass over

with a piece of paper. Mrs. Kelly took the oil home and laid it on the corner of the chimney-piece in her bedroom, where it remained till the morning of the 23rd March, when about four o'clock she got out of bed and swallowed it. She had no sooner taken the oil, and had scarcely time to lay the glass on the table, when she felt a burning sensation in her mouth, throat, and chest. She became sick, and immediately vomited the oil up on the floor, blood coming up with it. Her mouth and throat were excoriated, and the boards of the floor where she had vomited are all blackened with the liquid. For two or three months Mrs. Kelly had suffered much from the effects of the unfortunate mistake, especially during her confinement, which happened five days afterwards. Dr. Commins said they were not in a position to say what the defendant had put in the glass to produce such effects as these, but there was no doubt it had been some strong drug which had been put in instead of the water. The medical evidence was to the effect that either sal volatile or liquor potassæ would have produced the effects seen on the plaintiff's throat. Mr. M'Oubrey, for the defence, stated that the defendant had only put cinnamon water in the glass, and suggested that if Mrs. Kelly swallowed any deleterious drug it must have been some of the mixture she was in the habit of using as a French polisher. The defendant was then called, and said he had carried on business in Liverpool as a chemist and druggist for fifteen or twenty years. He recollected the plaintiff coming to his shop on the 20th March, 1869, and asking for some castor oil. She told him she would have anything but peppermint in it, and he then took down a bottle from a shelf opposite the counter, and put some cinnamon water in the glass. Mrs. Kelly returned on the Tuesday morning and said her mouth was sore, and then she three times pointed out to him the bottle from which he poured the liquid into the glass before he put in the castor oil. This bottle contained cinnamon water. Defendant said there was nothing approaching to liquor potassæ kept on that shelf—in fact, he kept none of these alkaline matters near the place where he took the cinnamon water from—The jury found for the plaintiff, damages £10.

OBTAINING GOODS BY FALSE PRETENCES.

At the Guildhall, on August 3rd, George Gorfinkle, *alias* Robert Oxley, was charged on remand, before Sir Robert W. Carden, with obtaining goods from various places by false pretences. It appeared that on the 19th July the prisoner went to Messrs. Maw and Co., 11 and 12, Aldersgate-street, surgical instrument makers and druggists' sundrymen, and stated that he came from Mr. Linay, of Cambridge, a customer of theirs, for some union smelling bottles. They showed him some, and he selected two, at 19s. each. On the same day he pledged one of them at Mr. Harrison's, in Aldersgate-street, for 8s., and on the 26th he offered the other in pawn; but a communication was in the meantime made to Mr. Harrison by Hawke, a detective officer, and he was taken into custody. Mr. Linay, a chemist at Cambridge, said the prisoner had managed his business twice for him about two years ago. About eight months since he called on him and said he was with Mr. Rogers, of Newmarket, and was taking his holiday. He stayed with him for about a fortnight and then suddenly disappeared, taking with him witness's gold watch. He never gave the prisoner any authority to get the smelling bottles from Messrs. Maw. The prisoner, who had nothing to say, was fully committed for trial on this charge. William Joseph Fawkes, detective officer, said he saw the prisoner in the Moor-lane station, and told him that his name was Robert Oxley, and that he was wanted for stealing a gold watch at Cambridge. The prisoner then gave his address at 10, Paradise-place, Finsbury. Witness went there, and in a box found a quantity of scent and soap, which the prisoner had obtained from Messrs. Whitaker and Grossmith, of 120, Fore-street, in the name of Mr. Shrubsole, of Chester. The next charge proceeded with was one of obtaining four boxes of cigars from Messrs. Huxley and Co., of 13, Whitechapel-road, in the name of Mr. Linay. Sir Robert W. Carden committed the prisoner for trial on this charge also.

INDECENT ASSAULT.

At the Dudley Police-court, on the 27th ult., John O'Dowl, assistant to Mr. Meredith, surgeon, of Netherton, was

charged with indecently assaulting Sarah Bennett, the wife of a boatbuilder, of Netherton. There was some discrepancy in the evidence deposed to, and in consequence of the excellent character of the accused, the magistrates dismissed the case.

ACCIDENTS.

FIRE IN A CHEMIST'S SHOP IN BRADFORD.

On July 27th a fire took place on the premises of Mr. David Taylor, chemist and druggist, Manchester-road, which was, unhappily, attended with fatal consequences. The premises consist of a shop on the ground floor, with kitchen and small room at the back, and upstairs was Mr. Taylor's dwelling-house of two bedrooms and a sitting-room. Above these again were the attics, which were used as store rooms, and a cellar below was also used as the same. From the shop there is a door leading into the passage, and in this passage Mr. Taylor was emptying a large 36-gallon cask of benzoline—a very inflammable substance—into smaller vessels, shortly after ten o'clock, and in order to do this, he had to use a candle. He got several of the vessels filled, and was in the act of filling a glass earboy, when a cat, which had been jumping about, knocked over the candle. This confused Mr. Taylor, who had in his hand a half gallon measure filled with the spirits, which he spilt, and of course it instantly took fire. He and his wife then tried to put out the flames with buckets of water, but it was of no avail. In less than a minute the staircase, which was immediately above the place where the spirits were, was in a blaze, and all communication with the second flat cut off, and the rooms and attics in a mass of flames. Meantime information was sent to the offices, and the Corporation Fire Brigade, under Superintendent Hudson, and the Liverpool and Globe Insurance Company's brigade were soon on the spot. About ten or fifteen minutes after the arrival of the brigade, a woman in the crowd informed some of the firemen that a child was sleeping in the back room of the second story. Superintendent Hudson immediately got into the room where the child was said to be, and after groping about for some time in the burning mass, he found the child, one year and nine months' old, lying covered with rubbish in the bed. He took it in his arms and had it conveyed to the Little Horton Police Station, where it was found to be quite dead—being, in fact, little more than a black and charred mass. It had only been put to bed about half an hour before, and was the only child of Mr. Taylor. There was, fortunately, a good number of fire-plugs in the vicinity, and in about an hour after the arrival of the brigades the fire was got under. It appears that it, as well as the surrounding buildings, had a miraculous escape from being blown to pieces, as a barrel with 28 lbs. of gunpowder was in the attic, and when being brought out by Superintendent Hudson, was so warm as almost to burn his fingers. Besides this, casks of the most inflammable material, including naphtha, oils, &c., were laid up in the attics and cellars. The druggist's shop is greatly damaged, while the other parts of the house are almost gutted. We believe the premises were only insured for £200, while Mr. Taylor states that he had from £1,500 to £1,800 worth of articles.

POISONING CASES.

On the 25th ult., a child named Elizabeth Anne Worthington, residing in Stamford-street, Stalybridge, was accidentally poisoned by having a dose of Gibson's vermin killer administered to it. The child was teething, and a woman who was nursing it gave the infant, with the consent of the mother, a dose which was thought to be a teething powder. The child was immediately seized with convulsions, and died in a few minutes. It was then discovered they had carelessly administered powder for killing vermin. The package was properly labelled, but the woman could not read.

On the 30th ult., the employees at the Netham Chemical Works, Bristol, to the number of five hundred, proceeded by steamer to Penarth, to enjoy their annual holiday. The proceedings gave the greatest satisfaction.

OBITUARY.

MR. B. B. ORRIDGE.

EVERY chemist and druggist knew Mr. Orridge by repute, and great numbers of them were personally acquainted with him. His large business as a valuer and transfer agent gave him abundant opportunities of becoming familiar to the members of the trade, and the able and conscientious manner in which he carried out the difficult duties of that occupation won for him the respect of all those for whom he acted. He was born at Malta in 1814, his father holding an official position in the island; but he left in his infancy, and after being educated at Oakham Grammar School, was apprenticed to an uncle, a chemist and druggist. He afterwards resided in the Marylebone Infirmary as dispenser, and subsequently commenced business as transfer agent, &c., which he continued successfully to carry on until his recent death at the age of 56. Publicly he was, as all our readers know, for many years on the Council of the Pharmaceutical Society, and also a member of the Common Council of London. He withdrew from both of these positions during the past year on account of failing health. The Benevolent Fund of the Pharmaceutical Society was greatly indebted to Mr. Orridge for his untiring exertions on its behalf. His antiquarian researches among the archives of Guildhall, and the works which he has left behind him—"The Citizens of London and their Rulers" and "Illustrations of Jack Cade's Rebellion"—attest his ability and industry.

MR. J. T. PORTER.

WE record the tragic death of this young chemist, at the early age of 23, with a feeling of personal loss. One of the most promising among the rising generation of pharmacutists, Mr. Porter has been cut off from life just as he began to grapple with it. He was formerly in the laboratory of Messrs. John Bell and Co., 338, Oxford-street, where his pleasant manners and manipulative skill won him both love and honour. He recently obtained an appointment as Chemist to the A. B. C. Sewage Works recently established at Hastings, where we met him in the highest of spirits but little more than a month ago. We have not yet received any report of the coroner's inquest, but the facts as they have reached us are these:—Two men had gone down into the tank where the process is conducted, when cries for help were heard from them. Mr. Porter ran foremost to their aid, and with impulsive generosity descended into the tank, without thinking of the danger, but ere he reached the bottom was overpowered, and fell into the water. The bodies of the other two men have been discovered, but not that of our friend, which it is supposed has been washed into the sea. He had lived long enough to show talent of a high order, and to have it appreciated, and the last act of his life was noble and brave. Mr. Porter was a Pharmaceutical Chemist, having passed his major examination with honours; while in London he was a very active member of the London Chemists' Association, and was also a contributor to this journal. An article by him, on a new form of apparatus for the manufacture of nitrous oxido gas, was published by us exactly a year ago.

GOSSIP.

THE *employés* of Messrs. Burgoyne, Burbidges, and Co., of 16, Coleman-street, enjoyed their annual excursion into the country on Saturday, July 16th. The Wheatshaf Hotel, Virginia Water, was selected for the holiday, and from an account furnished to us by a correspondent, the day's proceedings seem to have been most enjoyable. Prizes were offered by the firm for the highest efficiency in certain athletic sports. Dinner was provided in a tent on the grounds, and under the able presidency of Frederic Burbidge, Esq., a succession of toasts and songs followed. It was ac-

knowledgeed by all that this year's excursion surpassed all previous ones for thorough enjoyment, the athletic sports having largely contributed to that result.

The Town Council of Sheffield have refused the application of Mr. J. T. Dobb, wholesale druggist, of Westbar, to be allowed to store 200 gallons of petroleum on his premises. It was resolved that no licence be granted to Mr. Dobb for the storage of more than forty gallons, in consequence of the contiguity of other dwelling houses.

The *Stationer* gives us the following item of news, which illustrates how, between two stools, one may fall to the ground. Our contemporary has secured two facts correctly, but in attempting to piece them together he has gone astray:—The *Pharmaceutical Journal* will, in future, be edited by Dr. Benjamin H. Paul, *vice* Mr. John Cargill Brough, who has been appointed principal Librarian to the London Institution.

In consequence of the outbreak of war it is presumed that the International Exhibition proposed to be held next year in London, will probably not come off, as France, Prussia, and Germany will have a great deal too much on their hands to devote their time to the collection of objects of art and industry.

MARRIED.

August 9, at St. Mary's, West Brompton, by the Rev. Arthur Veysey, Septimus Vaughan Morgan, 6, The Boltons, South Kensington, to Ellen Sarah, younger daughter of the late Henry Simkin, Esq., of Highbury Place.

THE GAZETTE.

BANKRUPT.

ELY, JOHN JAMES, 284, High-street, Chatham, surgeon.

PARTNERSHIPS DISSOLVED.

BEAUMONT and HOUSEMAN, Knaresborough, York, surgeons; Dec. 31 1869.

BLACKMORE and MORRISON, 44, High-street, Barnstaple, Devon, surgeons; July 5. Debts by Robert Paul Morrison, who continues the business.

BUTLER, WILLIAM THOMAS AND JOSEPH TANNER, jun., Frome, Somerset, and 42, Paternoster-row, London, printers and stereotype foundry; July 1, 1868. Debts by Joseph Tanner, jun., who continues the business under the name of Butler and Tanner.

HAAS, JULIUS ROBERT and Co., Leeds, manufacturing chemists and dry-salters; July 13. Debts by Julius Robert Haas and Edmund Appleby, who continue the business.

MCBEAN, HUOH, and Co., manufacturing chemists and oil merchants, Glasgow; as regards Alexander Dallas Hall. Business continued by the remaining partners.

THOMAS and HARVEY, 297, High-street, Poplar, Mx, surgeons and apothecaries; June 25. Debts by Thomas Harvey, who continues the business.

NOTICES OF FIRST GENERAL MEETING FOR ARRANGEMENT OR COMPOSITION.

DEWSNAP, WILLIAM, Theresa-terrace, Hammersmith, surgeon.

HARRINGTON, THOMAS, jun., Thornsett, chemist, druggist, and tea and general provision dealer.

HOGG, JAMES, trading as JAMES HOGG, and also as STANLEY RIVERS and Co., publisher, and formerly trading as MITFORD and Co., proprietary pharmacist, late 8, Falsgrave-place, Strand, now 217, Piccadilly.

WOOD, JOHN, Faversham, chemist.



THE PHARMACEUTICAL COUNCIL AND DR. REDWOOD'S ANNUITY.

TO THE EDITOR OF THE "CHEMIST AND DRUGGIST."

SIR,—No doubt your editorial eye has scanned the strange proceedings of the Pharmaceutical Council of July 6th, and I have little doubt you have passed an independent judgment thereon. Hearing the adverse and unmeasured comments freely passed upon the unusual and precipitate process of money endowment carried out on that occasion, and fully coinciding in the tone of these wide-spread complaints, on the 20th of July I wrote a letter to the editor of the *Pharmaceutical Journal*. I had no doubt but that its columns

were open to free criticism upon events and circumstances affecting our Society, and the interests of its members. It appears, however, from the subjoined correspondence, this latitude is not at present permitted, and that letters reflecting upon the Council are suppressed. It is quite likely, also, other letters have been refused admission.

The columns of our journal being closed, I have ventured to send you the correspondence and my letter for publication, with these comments upon the matter in question.

There is a bye-law of the Society rendering it unnecessary for the Council's proceedings to be confirmed, according to the salutary custom, at a subsequent meeting of the Council. Whilst such an objectionable bye-law governs the proceedings, and if even it did not, no words but those of strong reprobation are so fit to characterise the indecent haste of that section of the Council, who, spite of plan, remonstrance, and protest, would brook no delay, but carried the resolution which virtually voted away twelve to fifteen hundred pounds of the Society's funds at a moment's notice. I am at a loss to discover the reason for this unwise and arrogant procedure. I am quite sure the respected Professor did not desire this manipulation of over-zealous friendship. I can only suppose, therefore, this procedure to be the result of unwisdom and arrogance.

The objectionable bye-law which, in a measure, makes final the action of any half-dozen members of the Council must be removed without delay, and the members of the Society will do well to show a wideawake interest in the proceedings of the Council, and bring due pressure to bear so that its proceedings shall be properly reported by independent agencies. By such means, and by sending suitable gentlemen to represent us at the Council, we shall be able to prevent precipitate and thoughtless expenditure in the future.

In animadverting upon the action of the Council, I have not a word to say about Dr. Redwood. His merits are well known, and his long-valued services are freely acknowledged by all.

Thanking you for the means your journal affords for independent and open criticism,

I am, Sir, yours, etc.,
ROBERT HAMPSON.

Manchester, August 8th, 1870.

The following is the correspondence referred to, commencing with the original letter addressed to the editor of the *Pharmaceutical Journal* :—

THE COUNCIL AND DR. REDWOOD'S ANNUITY.

SIR,—I wish to make a few observations upon the annual grant of £100 to be paid to Dr. Redwood.

In doing so, I do not for a moment call in question the merits or demerits of the respected Professor. But I do call in question the very unusual procedure of a section of the Council, who, without the proper and customary notice, first attempted to increase the value of Dr. Redwood's Professorship by £100, so as to make up the loss of his editorial appointment, and failing in this, carried, by a majority of one, the annuity of £100 in his favour.

I most certainly question the right of this very prodigal section to spend our money in this objectionable manner. I am afraid also that the endowment will be considered by many as a piece of unwarrantable jobbery.

Many with whom I have spoken, who entertain the highest esteem for Dr. Redwood, do not hesitate to condemn the act of the Council in very plain terms.

M. P. S.

Manchester, July 20, 1870.

17, Bloomsbury-square, W.C.,
26th July, 1870.

SIR,—Without entering at all into the merits of the question you raise in your letter, I would venture to suggest for your consideration, whether it is not a matter that might be dealt with better by a communication addressed to the Council than by correspondence in the journal.

For my own part, I am desirous of avoiding the discussion of matters that involve personal considerations, and of confining my attention as editor to the consideration of

matters more general in their relation to the trade and to sciences connected with it.

The question as to the propriety of the grant to Mr. Redwood seems to me as falling more properly within the function of the Council to discuss and deal with.

I am so busy just now that I have written very hastily. I hope, however, that I have explained myself clearly, and shall be glad to hear from you on the matter.

I remain, yours truly,
BENJ. H. PAUL.

63, Piccadilly, Manchester,
July 27th, 1870.

SIR,—I am much obliged for your letter in reference to my communication.

I quite sympathize with your desire to avoid the introduction of matters of a personal nature into the journal, and had my note treated the subject personally I would not have troubled you with it.

The question involved is, strictly speaking, of public interest, inasmuch as it deals with the Council of the Society, and its unprecedented mode of voting money without the usual notice having been given to the members of the Council.

I shall feel obliged if you will insert the letter.

I am, Sir, your obedient servant,
B. H. Paul, Esq.,
17, Bloomsbury-square, London.

17, Bloomsbury-square, W.C.,
4th August, 1870.

SIR,—I am sorry you have not adopted my suggestion as to the letter, and that you still desire its appearance. I send you a proof, and shall insert it with your name unless I hear from you to the contrary before Wednesday next.

Yours very truly,
BENJ. H. PAUL.

R. Hampson, Esq.,
63, Piccadilly, Manchester.

63, Piccadilly, Manchester,
August 15th, 1870.

SIR,—So much time having elapsed since I wrote my letter, and so much unnecessary difficulty having been placed in the way of its appearance, I have decided not to trouble you further with it.

I am, Sir, your obedient servant,
ROBERT HAMPSON.

THE POISON REGULATIONS.

TO THE EDITOR OF THE "CHEMIST AND DRUGGIST."

SIR,—I think it is not quite fair to accuse the opponents of the rejected Poison Regulations of "avoidance of discussion since their temporary victory," seeing that there has been nothing to discuss; for whilst the supporters of the measure have made no sign, all that has yet appeared in print on the subject has come from the opposite side. Now, if the advocates of the regulations have nothing to say in their favour, it is hardly to be expected that their opponents should continue a one-sided discussion, or that those who object altogether to "any enactment, the object of which shall be to compel a chemist to store and dispense his poisons in a particular manner," should put forth any plan for that purpose. But in view of the possibility that official pressure and the clamours of the press may succeed in forcing us to accept some regulations on the subject, we are quite prepared to discuss any practical scheme that may be advanced, if one can be devised sufficiently elastic to meet the varying conditions of the trade.

Those, however, who are so anxious to enforce these regulations, would do well to remember that moral responsibility diminishes in proportion as legal responsibility is increased, and that the substitution of a rigid law for an elastic principle does not always produce satisfactory results.

I am, Sir, yours truly,
Manchester, July, 1870. W. WILKINSON.

SUPERVISORS SUPERVISED.

TO THE EDITOR OF THE "CHEMIST AND DRUGGIST."

SIR,—Having recently purchased a business, the Supervisor of the Excise for the district called on me to take out a new Patent Medicine Licence, refusing to allow the transfer of my predecessor. I wrote to Somerset House, whence I received the subjoined reply, the publication of which may save some of your readers from complying with similar illegal demands.

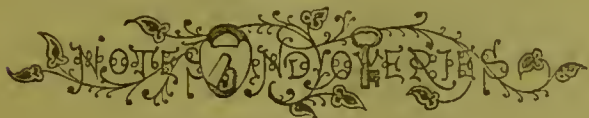
I am, Sir, yours truly,
"LICENCE."

(COPY.)

Inland Revenue, Somerset House, London, W.C.,
1st August, 1870.

SIR,—In reply to your application of the 14th ult., I am desired to inform you that the Supervisor has been instructed to transfer your predecessor's licence to you as requested. He was in error in supposing that the licence could not be thus transferred.

I am, Sir, your obedient servant,
W. R. ROSSETTI,
Assist.-Secretary.



MR. F. BARNES, 224, Roman-road, Bow, will be much obliged if any gentleman in or near London, who has one of Bushby's pill machines, will kindly send his address, with an invitation to call and see the machine at work.

Can you, Mr. Editor, or some of your many readers, give a formula for destroying the tiny, red, spider-like insect called by country people the harvest bug, which insinuates itself into the pores of the skin to the great discomfort of
A SUFFERER.

T. L. M. P. S.—We quote in full Parrish's directions for Syrup Ferri Phosphatis Comp. In his "Companion" Mr. Squire states that no preparation equals that made by Parrish himself, but a very excellent preparation can be made by carefully following the directions given below.

Parrish's Compound Syrup of Phosphates (Chemical Food):—

℞ Ferri Sulph. 3x.	℞ Muriatic Acid,
Sodæ Phosph., 3xii.	Liq. Ammonia, aa q. s.
Calcis Phosph., 3xii.	Pulv. Cocci, ʒij.
Ac. Phosph. Glacial, 3xx.	Aqua, q. s.
Sodæ Carb., ʒii.	Sacchari, ℔ii. ʒviii.
Potass. (Bi)carb., ʒi.	Aq. Flor. Aurant, ʒi.

Dissolve the sulphate of iron in ʒij of boiling water, and the phosphate of soda in ʒiv of boiling water. Mix the solutions, and wash the precipitated phosphate of iron till the washings are tasteless. Dissolve the phosphate of lime in ʒiv of boiling water, with sufficient muriatic acid to make a clear solution. When cool, precipitate it with water of ammonia, and wash the precipitate.

To the freshly-precipitated phosphates, as thus prepared, add the phosphoric acid previously dissolved in water; when clear, add the carbonates of soda and potassa previously dissolved in water, and muriatic acid to dissolve any precipitate. Now dilute with water till it reaches the measure of ʒxxii, add the sugar, and towards the last the cochineal; dissolve with the aid of heat, strain, and when cool add the orange-flower water.

As thus made, each teaspoonful contains about 2½ grains of phosphate of lime, 1 grain of phosphate of iron, with fractions of a grain of phosphate of soda and potassa, besides free phosphoric and hydrochloric acids. The solution is perfect, the taste agreeably acid, and the flavour pleasant. The disposition to precipitate a bulky sediment of the insoluble phosphates is one of the greatest annoyances in this preparation when made on a large scale, and can be obviated best by substituting hydrochloric acid for a suit-

able portion of the phosphoric acid used, taking care to separate the liquid into two portions, and adding the carbonate of soda and potassa to that consisting exclusively of the phosphoric acid solution, lest portions of chloride of sodium and chloride of potassium should be formed, and contaminate the resulting solution.

Ignoramus asks if we know of any books calculated to act as a guide to those assistants who intend going abroad; if not, he adds, "any hints you might give me on the subject would be gladly received." As we do not know where "Ignoramus" thinks of going to, we cannot mention any particular book likely to be of special service to him. We must, therefore, confine ourselves to general advice, which will be more useful than novel. Let him cram himself with reliable information of the country he proposes to adopt, and work hard to make himself well acquainted with the literature of his own calling. Then let him go into training for thorough hard work, prepare for many years of failures and disappointments—in short, acquire such qualities as would ensure success at home, and there is a fair chance that he may get on abroad.

G. B. (Darlington).—Thanks for your courtesy. The official instructions published by us, with the authority of the Pharmaceutical Society in February last, distinctly stated that "Vermin Killers" came under the second schedule of the Poisons Act, and therefore it is not necessary to register their sale.

DRYSALTER—the origin of the word. Referring to the suggestion of a Liverpool correspondent in our May number that the word drysalter was originally drugsorter, Mr. Alex. Gow, of Wolverhampton, sends us the following transcript from English Etymologies, by H. Fox Talbot, Esq.:—

"Dry Salter, the name of a trade, a person dealing in articles for dyeing."—Halliwell's Dictionary.

"I think the word may be a corruption of dye-salter, or perhaps of dye sorter, meaning one who sells all sorts of dyes, or who keeps an assortment of them."—English Etymologies, H. Fox Talbot.

It would be more in accordance with the usual course of the corruption of words that the prefix dry should be derived from drug than from dye. Another correspondent writes us as follows:—

Dear Mr. Editor,—Kindly inform your Liverpool correspondent that the word drysalter was not, as he suggests, originally "drug-sorter," but "sort-a-druggist,"—this, tell him, he can rely upon as correct.—Kendal.

Perhaps it is not universally known that the word apothecary is derived from the Greek *αποθηκη*, meaning merely a shop. From this origin also comes the French word *boutique*, which still retains precisely the same signification. It would be interesting to ascertain the steps by which apothecary came to be restricted in its meaning from a general to a special shopkeeper. Everyone can trace how it has now passed to a different meaning altogether, quite disconnected with a shop of any kind.

OUR American contemporary, the *New York Druggists' Circular*, furnishes the following items in its page of Notes and Queries.

SUGAR-COATED PILLS.—Mr. G. A. V. (Chicago Ill.), after experimenting for some time on the above subject, succeeded in the following way to imitate the sugar-coated pills made on a large scale:—Take the white of an egg, and in an evaporating dish beat with it as much powdered sugar, passed through a very fine sieve, as will make rather a thick fluid. Then place it in a water bath and evaporate to dryness, stirring constantly, that no sugar may be deposited. Pulverise and set aside for further use, marking it "Albumen c. Saccharo," or similarly. When pills are to be coated they first must be rolled (in a mortar), in an ethereal solution of balsam of tolu, in order to prevent the colouring of the sugar, and besides this, the coating will dry more rapidly, the pills becoming firmer, not being able to absorb the water, (moisture) of the "paste." From the mortar the pills are transferred to a sheet of writing paper, with the sides bent upwards, shaking being continued till they are perfectly dry. Then, to a small quantity of the saccharated albumen, add a few drops of water, at the same time beating for a short while, so that a thick paste will be formed.

Into this mass the pills are stirred, and when moistened on all sides, quickly poured into a wooden pill-box, which has been previously filled about one-third with the finest powdered sugar obtainable, and immediately shaken, or rather rolled, in a lively way and with great force, separating from time to time those cohering. When no more sugar will adhere, they are dried over a gentle fire, taking care not to bring them too near the stove lest they should crack. Shaking, of course, must be continued till dryness is effected. If necessary, the sugar coating is repeated. No tin box must be employed, for then the pills will be turned black. Glass is too smooth.

BRONZING FOR LEATHER.—The bronzing for leather is, of course, no true bronzing, but an imitation. It is prepared in the following way:—A small amount of so-called insoluble (in water) aniline violet is dissolved in a little water, and the solution is brushed over the articles; it will dry quickly, and perhaps may have to be repeated. Shoes that we treated ourselves in this way presented a beautiful bronze colour.

Who discovered quinia, and did it immediately come in to use as a therapeutical agent? It would seem as if this question would hardly require an answer, as the early history of an article so universally in use we would expect everybody to be familiar with. But on reflecting, it seems probable that the reverse of this is true. It may be stated, therefore, that in 1803, Dr. Duncan, of Edinburgh, had detected some of the active principles of cinchona bark. The great pharmaceutical discovery of quinia, however, was made in 1820, by Pelletier and Caventou, pharmaceutical chemists, of Paris. In 1823, Henry and Delondre, of the same city, announced the existence of quinidia. As the therapeutical effects of Peruvian bark had already become so well known, it could not be long before quinia must come into general use, and such was really the fact. Magendie and Chomel, of France, were active in introducing the alkaloid into practice in their own country, and Dr. Elliotson and others, in England; and from those two great medical centres its use spread rapidly over the rest of Europe and the Western world.

TO DETECT LINEN IN SILK AND COTTON IN WOOL.—*Old Subscriber (Morris, Ill.)*—A microscope with a magnifying power of about 80 diameters will very easily tell the nature of the fabric. We can give you, however, no description of the different fibres as they appear to the eye; they must be seen in order to be distinguished. Any work on the microscope will furnish you with exact drawings. A chemical test is the following, based on the solubility of animal substances in caustic potassa or soda:—A moderately concentrated solution of either caustic alkali will easily dissolve silk or wool, any residue in the latter being cotton, and in the former cotton or linen.



[The following list has been compiled expressly for the CHEMIST AND DRUGGIST, by L. de Fontaine-moreau, Patent Agent, 4, South-street, Finsbury, London; 10, Rue de la Fidélité, Paris; and 3, Rue des Minimes, Brussels.]

Provisional Protection for six months has been granted for the following:—

1746. T. J. Smith, of London. Improvements in producing caustic soda and caustic potash. Dated 17th June, 1870.
1752. J. O. Ewing and J. J. Coleman, both of Glasgow. Improvements in treating or preparing certain lubricating oils. Dated 18th June, 1870.
1753. W. E. Newton, of London. An improved mode or process for obtaining glycerine from soap-makers' spent lyes. Dated 22nd June, 1870.
1800. J. Sinclair, of Manchester. Improvements in respiratory apparatus. Dated 24th June, 1870.
1801. S. F. Van Choate, of Boston, U.S. Improvements in distilling alcoholic liquors. Dated 24th June, 1870.
1806. G. Thomson, of Glasgow. Improvements in treating manganese ores, oxides, or salts, and in making ferro-manganese. Dated 25th June, 1870.
1823. R. Kell, of Bradford, York. Improvements in treating and distilling petroleum, and in apparatus employed therein. Dated 27th June, 1870.
1845. H. Medlock, of Tavistock-square. An improved method of, and apparatus for, separating aqueous from oleaginous substances. Dated 28th June, 1870.

1871. J. A. McIntosh, of Leith, North Britain. Improvements in distilling oils. Dated 1st July, 1870.
1892. M. Cahen, of Mulheim-on-Rhine, Prussia. An improved method of absorbing sulphurous fume, or sulphurous acid, and of obtaining thereby useful products. Dated 4th July, 1870.
1903. E. T. Hughes, of London. Improvements in the manufacture of caustic soda. Dated 5th July, 1870.
1903. A. Prince, of London. Improvements in soldiers' litter, and in trucks or ambulances connected therewith. Dated 6th July, 1870.
1937. R. Hutchison, of Glasgow. Improvements in bleaching and improving vegetable and animal oils and fats. Dated 8th July, 1870.
1942. W. G. Jackson, of Dockhead, Surrey. Certain improvements in the manufacture of cordials. Dated 8th July, 1870.
1972. S. Putney, of Gray's Inn-road. An improved apparatus to be worn by railway travellers, for lessening the effects of vibration on the spine or nervous system. Dated 12th July, 1870.

Letters Patent have been issued for the following:—

28. J. G. Tongue, of London. Improvements in processes for the purification of saccharine syrups. Dated 4th January, 1870.
46. J. Hargreaves and T. Robinson, both of Widnes, Lancashire. Improvements in treating sulphur, sulphide of hydrogen, pyrites, and other compounds of sulphur, and in obtaining products therefrom. Dated 6th January, 1870.
60. J. Gamgee, of Bayswater. Improvements in effecting the preservation of animal substances, and in the production and employment of a new antiseptic. Dated 7th January, 1870.
97. W. H. Balmain and W. J. Menzies, both of St. Helen's, Lancaster. Improved means for conveying and storing vitriol. Dated 12th January, 1870.
102. A. Clark and A. Van Winkle, both of Great Wild-street. Improvements in machines for bottling soda-water and other gaseous or effervescing liquids. Dated 12th January, 1870.
157. E. T. Hughes, of London. Improved apparatus for diminishing the effects of the oscillation of vessels, and for preventing sea sickness. Dated 19th January, 1870.
164. J. A. D. Cox, of Notting hill. An improved vehicle or composition, to be mixed with whitelead and other pigments, in lieu of linseed or boiled oil, turps, and dryers to form paint. Dated 19th Jan., 1870.
180. D. Spill, of Hackney. Improvements in the treatment of xyloidine to be employed for purposes useful in the arts. Dated 20th Jan., 1870.
203. W. T. Waite, of Southampton. Improvements in the preparation of animal charcoal for use in treating saccharine solutions. Dated 22nd January, 1870.
204. W. T. Waite, of Southampton. Improvements in filtering saccharine solutions and other liquids, and in means or apparatus employed therein. Dated 22nd January, 1870.
205. W. Gorton, of Southampton. Improvements in the preparation of fermentable saccharine matters. Dated 22nd January, 1870.
216. R. S. Dalo and C. Schorlemmer, both of Manchester. Improvements in preparing colouring matters. Dated 24th Jan., 1870.
219. F. Kohn, of Westminster. An improved method of extracting juices from plants, and of separating liquid or soluble matter from solids. Dated 24th January, 1870.
1127. T. Melsaac, of Putney, Surrey. An improved folding bed table for the use of invalids and others. Dated 18th April, 1870.
1186. P. Spence, of Newton Heath, Manchester. Improvements in the production of the prussiate of potash, prussiate of soda, and prussian blue. Dated 23rd April, 1870.
1371. J. Heddle, of Leith, North Britain. Improvements in preparing, clarifying, and preserving vegetable juices and other liquids. Dated 13th May, 1870.

Specifications published during the month. Postage 1d. each extra:—

3295. W. Gossage. Obtaining hydrate of soda and potassa, &c. 10d.
3304. H. H. Violet. Stoppers for bottles. 8d.
3318. W. H. Perkin. Colouring matter. 4d.
3319. K. Ogden. Deodorizing compound. 4d.
3324. C. Faure. Galvanic batteries. 6d.
3355. T. F. Lynch. Bottles for poisons, &c. 4d.
3378. H. A. Bonneville. Electric batteries. 6d.
3406. B. Goddard and W. Finley. Mill machines, &c. 8d.
3417. D. Barker. Varnish, &c. 4d.
3428. S. Wyatt. Preserving meat. 4d.
3472. W. Spence. Manufacture of soda crystals. 4d.
4505. H. Larkin and W. White. Producing potassium, sodium, and zinc. 4d.
3522. T. Prideaux. Purifying and calcining gas and soap limes, &c. 4d.
3525. J. B. Spence. Manufacture of alum. 4d.
3526. J. B. Spence. Substitute for alum. 4d.
3556. H. Byk. Refining and bleaching paraffine. 4d.
3581. A. A. Croll. Treating ammoniacal liquor. 4d.
3597. W. R. Lake. Preserving dead birds and carcases. 4d.
3675. G. T. Bousfield. Obtaining colouring matter. 4d.
3645. A. M. Clark. Manufacture of superphosphate of lime. 4d.
- 1870.
372. W. R. Lake. Preparing ammoniated sulphuric acid for the manufacture of manure. 4d.

Varia.

SOLUBLE GARNET DYE.

The *Engineer* states that the new dye known as soluble garnet seems to be coming more largely into use on the Continent, and as the colours produced with it are exceedingly brilliant, similar to those obtained with archil, but much more stable when exposed to light and air, the garnet dye is likely to become a great favourite. The dye

was first prepared by Casthelaz, of Paris, and is the ammonia salt of isopurpuric acid, which is formed by the action of a metallic cyanide upon picric acid. It is not prepared from the pure crystallised, but from an inferior kind of picric acid, and is probably destined to replace the archil in many cases, in imparting to wool all shades from garnet to chestnut brown. It may be readily combined with other pigments, so that a number of different colours may be obtained. According to Casthelaz, the dyeing of wool and of silk is effected by the addition of an organic acid to the bath, for instance, acetic or tartaric acid, mineral acids being excluded. The dye bath for silk should be cold or tepid in the beginning. Different shades in red and brown are thus obtained that are dependent upon the concentration of the bath, the nature of the mordant, and the time of the operation.

"SEELY'S PIGS."

One object of interest (says *Nature*) at the Working Men's International Exhibition, is a display of iron, obtained by a process invented by Sir Antonio Brady, from some of that dockyard refuse irreverently described as "Seely's pigs," and which has been the subject of discussion both in Parliament and by the press. These pigs were of different qualities, but were all largely contaminated with phosphorus and sulphur, and were supposed to be of little or no value. The presence of phosphorus renders iron brittle when it is hot, the presence of sulphur renders it brittle when it is cold. The pigs containing both were worth in the market about £2 5s per ton. By Sir Antonio's process the sulphur and the phosphorus can be extracted at a cost of about 35s. per ton, and the residual iron is superb. It bears any and every test. One of the pieces exhibited had been beaten cold to the thinness of writing paper at one end, drawn to a point at the other, and then twisted by hand eight turns in an inch at a single heating. Massive bars had been beaten cold until the surfaces on each side of the bend came into perfect contact, and a plate six inches wide and half-an-inch thick had been beaten till its edges were in contact, the flat surface remaining horizontal. In neither case were there any traces of a flaw either at the convexity of the curve, where the metal was stretched, or at the concavity, where it was compressed. Holes in a thick plate had been enlarged by driving cones into them, and in a word, the iron had been knocked about in every possible way. At a very low estimate it is worth £11 per ton, and as there is plenty of the raw material to be had, the profit of the invention seems likely to be great.

A CURIOUS COINCIDENCE.

A curious instance of "two people thinking the same thing," not quite at the same time, has just been brought to notice by an American chemist. In 1840 the famous Dalton read an essay to the Manchester Philosophical Society on the "Quantity of Acids, Bases, and Water in Salts" in which he propounded the general doctrine of solutions, and announced as a great discovery, quite new to him, that the addition of salt to water increased the weight of the fluid while the volume remained the same. His words were—"The water and solid matter are the same in bulk as the water itself. The solid matter only adds to the weight. The solid matter would go into the pores of the water." Now the curious point is that Swedenborg in 1719—one hundred and nineteen years previously—had written and published these words:—"We have shewn that the mere particles of salt cannot at all add to the bulk, but only the weight, because they occupy the spaces between the aqueous particles." The coincidence is very striking, and upon the strength of it, and a general similarity of remarks which we have not room to quote, Mr. Beswick, of New Jersey, U.S., claims that "the Swedish philosopher was the first to suggest, verify, publish, and place on record, in a work called 'Principles of Chemistry,' the date of whose publication is certain, the general doctrine of solutions." Science will not benefit much from knowledge of this fact—though it is interesting to be known.—*Illustrated Midland News*.

DISPENSERS IN THE NAVAL HOSPITALS.

The following regulations relative to the appointment of Dispensers and Assistant-Dispensers in Her Majesty's naval hospitals at home and abroad, have lately been issued by the Admiralty Board. 1. A candidate for entry as Assistant-

Dispenser shall make a written application to that effect, addressed to the Secretary of the Admiralty. 2. As vacancies occur, candidates will be ordered to attend at the office of the Director-General of the Medical Department of the Navy, observing that no person can be admitted as an Assistant-Dispenser unless he possesses the minor qualifications of the Pharmaceutical Society; but Dispensers or Assistant-Dispensers in charge of stores must possess the major qualifications of the Pharmaceutical Society. 3. The age of Assistant-Dispensers on entry must not be less than twenty years, or more than twenty-five. 4. The daily pay of Assistant-Dispensers will be as follows: under 5 years' service, 5s.; under 8 years' service, 5s. 6d.; under 11 years' service, 6s.; under 14 years' service, 6s. 6d.; under 17 years' service, 7s. 6d.; under 20 years' service, 8s. 6d.; and for every additional year an addition of 6d. per diem, till 10s. a day is reached. 5. When in charge of stores an additional allowance will be granted, viz., at Haslar and Plymouth Hospitals, 2s. per day, with the title of Dispenser; and at other Home and all Foreign Hospitals, 1s. per day. 6. An allowance of 6d. a day, in lieu of fuel and lights, will be granted to all Dispensers and Assistant-Dispensers, and they will be provided with quarters. 7. Superannuation will be allowed in accordance with the Superannuation Act of 1859, and a Certificate of Qualification will be required from the Civil Service Commissioners, under the terms of the Order in Council of 4th June, 1870, published in the *London Gazette* of the 7th June, 1870. 8. Assistant-Dispensers will be liable to serve in any of Her Majesty's Naval Hospitals at home or abroad, to which they may from time to time be appointed.—*British Medical Journal*.

WINTER SESSION OF THE MEDICAL SCHOOLS.

The medical schools in connection with the London hospitals will commence their winter sessions in October; and, as the 1st of October this year falls on a Saturday, some of them will commence business on that day, while others will defer the opening until Monday, the 3rd. At St. Mary's Hospital, Paddington, the session will commence on Saturday, the 1st, when the inaugural address will be delivered by Mr. Gascoven. King's College Medical School will be opened on Monday, October 3, with an introductory address by Professor Wood, F.R.C.S.—*London Figaro*.



IN the presence of so great a calamity as the war which now unhappily rages on the European continent, it is difficult to write of commercial movements in an ordinary commercial spirit. In nearly every department of business, commotion and disarrangement has occurred in consequence of the war, and although it seems at first sight hard that other lands should be compelled to suffer for quarrels in which they have taken no part, yet it only requires a moment's thought of the tremendous devastation inflicted on the nations actually engaged, to remove from our minds any such selfish considerations. To calculate whether on the whole this country will be benefited or injured by the war now in progress, is neither our province nor our wish. It would be mean as well as useless to complain of the one event, and it would be horrible to gloat over the other. Recalling our words on this subject last month, however, we cannot forbear to remark on the wonderful rapidity with which the most astounding results seem to develop themselves. As we wrote then the clouds seemed about to disperse; on the very day that our journal was printed all hopeful prospects were cast aside, and bitter war proclaimed; since then excited readers have impatiently chafed at what seemed to them unnecessary delays, and yet in one short month the beginning of the end seems to have come, opening with it, however, a long vista of future horrors and changing scenes, the unfolding of which we must needs leave to history. Our own efforts to bring into more general communication the pharmacutists of this country and of France, which we have but recently commenced in earnest, seemed likely to bear much fruit. Many of the best Parisian firms have through

our columns brought their specialities before the trade in England, and many others were preparing to do so. That this international business will continue to increase we do not doubt, but peaceful times are more conducive to its development than such occurrences as are now going on. We shall indeed be glad if in another month we shall find the affairs of both nations to have righted themselves, and that each will forbear henceforth to provoke these barren and ruinous struggles for glory.

In consequence of the demands of the war, much higher prices are now quoted for quinine, saltpetre, and chlorate of potash. Much of the glass chemical apparatus and other glass and porcelain ware employed by chemists is manufactured in Germany, and, we are informed, has become impossible to obtain. The natural Seltzer and other waters from German springs have advanced in price, in consequence of the men employed being drafted for service, and spirit of wine, following the grain markets, is also dearer. In this place we may with propriety refer to some samples of beetroot spirit which have been shown to us by M. Jacques Barral, of Basinghall-street, London. The price is considerably lower than that manufactured from grain, strength for strength, as might be anticipated; and the samples given to us are perfectly sweet. Beetroot spirit has been manufactured before, but it has always been more or less contaminated with fusel oil, thus being quite unfitted for medicinal or perfumery uses. In this case it is claimed that the machinery employed (which it is M. Barral's object to introduce into this country), is the means whereby that objection is obviated. We anticipate that this spirit will be brought into the market soon, and we shall perhaps then have another opportunity of referring to it.

The United States Congress has passed a new Tariff Bill, which from the 1st of January, 1871, will alter the rates of import duties on many articles of foreign production. We quote those connected with our trade in which alterations will occur:—

Absinthe, per gallon.—Present duty, 2 dols. 50 c.; new duty, 2 dols.

Acid, nitric, not chemically pure.—Present duty, 10 per cent.; free. Ditto, muriatic.—Present duty, 10 per cent.: free.

Aniline dyes and colours.—Present duty, 1 dol. per lb., and 5 dols. per cent.; new duty, 50 c. per lb., and 35 per cent.

Antimony, ore of, or crude sulphuret of.—Present duty, 10 per cent.; free.

Arsenic.—Present duty, 20 per cent.; free.

Books which have been printed or manufactured more than 30 years.—Present duty, 25 per cent.; free.

Brimstone, crude.—Present duty, 6 dols. per ton; free.

Cassia, per lb.—Present duty, 20 c.; new duty, 10 c.

Chalk, unmanufactured, also cliff stone.—Present duty, 10 dols. per ton; free.

Cinnamon, per lb.—Present duty, 30 c.; new duty, 20 c.

Cloves, per lb.—Present duty, 20 c.; new duty, 5 c.

Cocoa, per lb.—Present duty, 3 c.; new duty, 2 c.

Chocolate, per lb.—Present duty, 7 c.; new duty, 7 c.

Cork, wood, and bark, unmanufactured.—Present duty, 30 per cent.; free.

Ginger root, per lb.—Present duty, 5 c.; new duty, 2 c.

Ditto ground, per lb.—Present duty, 8 c.; new duty 5 c.

Hemlock, bark, seed, and leaf.—Present duty 20 per cent.; free.

Iodine, crude.—Present duty, 50 c. per lb.; free.

Lemon and orange peel, crude.—Present duty, 10 per cent.; free.

Limes.—Present duty, 20 per cent.; new duty, 10 per cent.

Mace, per lb.—Present duty, 40 c.; new duty, 25 c.

Nutmegs, per lb.—Present duty, 50 c.; new duty, 20 c.

Oils, sesame seed, benne and cotton seed.—Present duty, 20 per cent.; new duty, 30 c. per gallon. Ditto, palm and cocoanut.—Present duty, 10 per cent.; free. Ditto, animal.

—Present duty, 20 per cent.; new duty, 20 c. per gallon. Ditto, linseed, per gallon.—Present duty, 23 c.; new duty, 30 c.

Opium, per lb.—Present duty, 2 dols. 50 c.; new duty, 1 dol. Ditto, prepared for smoking, and all preparations, if not otherwise provided for.—Present duty 100 per cent.; new duty, 6 dols. per lb.

Pepper, per lb.—Present duty, 15 c.; new duty, 5 c. Ditto, ground, per lb.—Present duty, 18 c.; new duty, 10 c.

Phosphates for fertilizers and all manures.—Present duty, 20 per cent.; free.

Resins, crude, not otherwise provided for.—Present duty, 20 per cent.; free.

Spices, all not otherwise provided for.—Present duty, 20 per cent.; new duty, 20 c. per lb. Ditto, when ground.—Present duty, 20 per cent.; new duty, 30 c. per lb.

Subacetate of copper.—Present duty, 6 c. per lb.; free.

Tapioca.—Present duty, 20 per cent.; free.

Ultramarine.—Present duty, 25 per cent.; new duty, 6 c. per lb. Verdigris.—Present duty, 6 c. per lb.; free.

The drug and chemical markets, in common with all others, have been very much depressed in consequence of the European war. The excited state of the Money Market prevents any speculative purchases, and, except for those articles required in warfare, the Continental demand for chemicals has largely fallen off. Messrs. William Cook, jun., and Co., report (Aug. 8), "Chemicals during the week have been dull, excepting chlorate of potash, which has been scarcely obtainable; the war news of to-day may possibly have a tendency to promote a firmer tone. Bleaching-powder: Some parcels have been sold by second-hand holders at a lower figure. Soda ash and refined alkali quiet. Soda crystals and bicarbonate of soda unaltered." Saltpetre is nearly 50 per cent. dearer, and, as we noticed above, a considerable advance has occurred in quinine; Jamaica sarsaparilla has returned to former quotations. Castor oil sells freely and is very firm at quoted prices. Camphor is very quiet in London. The following in reference to it is from Hongkong, dated June 22:—"Seeing no offers coming forward, some weak holders reduced their demands, and gave their stocks away at 15 dols. 50 c. to 15 dols. 25 c. per picul. This was done soon after issue of our last, purchasers buying in the hope of finding shipping opportunity later on. The latter was offered to them by the *Hopewell* going on the berth for London about a fortnight ago. When this became known, holders were at once much firmer; and, in spite of further considerable arrivals from Formosa, exporters had to pay 16 dols. per picul packed. Total settlements embrace about 2,500 piculs, and over 3,000 piculs are still left on the market, which most likely will be shipped forward on owners' account. Two other shipping opportunities for London are now also offering. Further supplies are expected from Formosa, and most likely present values will not be maintained."

From Calcutta we have reports very favourable to the prospects of the indigo crop. In some parts there is a complaint of too much rain for the late sowings, but generally a good supply is anticipated.

The oil markets are flat all round. Rape alone is firm. With regard to Olive, accounts from Spain are not very favourable as to the coming crop, but this does not seem to influence buyers. The following remarks with regard to Petroleum are from the *Oil Trade Review*:—"The market for American Refined, which, up to the middle of the month, was extremely quiet at the previous currency of 1s. 7d. to 1s. 7½d. per gallon, has since been greatly depressed by the deplorable change in Continental politics. The immediate effect has been to shut out Germany and other places from the advantages of trade generally, so that the arrivals of Petroleum which, on leaving the United States, were intended for the Continent direct, have been finally ordered to British ports, and this occurring simultaneously with a fall in prices at New York, together with augmenting stocks here, have united to produce considerable languor. At the same time, the heavier supplies coming to hand have rendered holders more anxious to realise, and buyers seeing this have operated very slowly at a depreciation of fully 1d. to 2d. per gallon on the rates before quoted, Standard White on the spot and for future delivery now ruling at 1s. 5½d. to 1s. 5¾d. Refined Coal Oil has become unsaleable through the falling off in the demand on the Continent, where the regular outlets for this article are closed, and as only trifling inquiries are made from home consumers, business within the last fortnight has been so much restricted that the value must be considered nominal. Petroleum Spirit has, however, been of ready sale, and combined with good deliveries, and the smallness of stock stiff prices have always been obtained."

Monthly Price Current.

[The prices quoted in the following list are those actually obtained in Mining lane for articles sold in bulk. Our Retail Subscribers must not expect to purchase at these market prices, but they may draw from them useful conclusions respecting the prices at which articles are offered by the Wholesale Firms.]

CHEMICALS.		1870.		1869.	
ACIDS—		s. d.	s. d.	s. d.	s. d.
Acetic	per lb.	0 4	to 0 0	0 4	to 0 0
Citric	per lb.	2 5½	.. 0 0	2 6½	.. 2 6½
Hydrochlor.	per cwt	4 0	.. 7 0	4 0	.. 7 0
Nitric	per lb.	0 5	.. 0 5½	0 5	.. 0 5½
Oxalic	per lb.	0 8	.. 0 0	0 7½	.. 0 7½
Sulphuric	per lb.	0 0½	.. 0 1	0 0½	.. 0 1
Tartaric crystal ..	per lb.	1 3½	.. 0 0	1 2½	.. 0 0
powdered	per lb.	1 3½	.. 0 0	1 8	.. 0 0
ANTIMONY ore.....	per ton	360 0	.. 420 0	360 0	.. 280 0
crude	per cwt	40 0	.. 0 0	32 0	.. 0 0
regulus	per lb.	75 0	.. 0 0	52 0	.. 0 0
star	per lb.	75 0	.. 0 0	50 0	.. 51 0
ARSENIC, lump.....	per lb.	16 0	.. 16 6	16 0	.. 16 6
powder	per lb.	7 3	.. 7 6	7 3	.. 7 6
BRIMSTONE, rough ..	per ton	160 0	.. 0 0	152 6	.. 0 0
roll	per cwt	11 0	.. 0 0	10 6	.. 0 0
flour	per lb.	12 0	.. 13 0	13 0	.. 13 6
IODINE, dry	per oz.	0 9	.. 0 9½	0 9½	.. 0 10
IVORY BLACK, dry ..	per cwt.	0 0	.. 0 0	0 0	.. 0 0
MAGNESIA, calcined ..	per lb.	1 2	.. 0 0	0 0	.. 0 0
MERCURY	per bottle	157 0	.. 0 0	137 0	.. 138 0
MINIUM, red	per cwt.	20 6	.. 21 0	20 9	.. 21 0
orange	per lb.	81 6	.. 32 6	31 6	.. 32 6
PRECIPITATE, red ..	per lb.	2 9	.. 0 0	2 6	.. 0 0
white	per lb.	2 8	.. 0 0	2 5	.. 0 0
PRUSSIAN BLUE	per lb.	0 0	.. 0 0	0 0	.. 0 0
SALTS—					
Alum	per ton	145 0	.. 150 0	145 0	.. 150 0
powder	per lb.	160 0	.. 165 0	165 0	.. 170 0
Ammonia:					
Carbonate	per lb.	0 5½	.. 0 6	0 5½	.. 0 6
Hydrochlorate, crude,					
white.....	per ton	480 0	.. 560 0	460 0	.. 540 0
British (see Sal Ammoniac)					
Sulphate	per ton	325 0	.. 330 0	325 0	.. 330 0
Argol, Cape	per cwt	50 0	.. 67 6	65 0	.. 80 0
Franco	per lb.	40 0	.. 50 0	45 0	.. 60 0
Oporto, red	per lb.	22 0	.. 24 0	22 0	.. 24 0
Sicily	per lb.	32 0	.. 40 0	32 0	.. 40 0
Naples, white	per lb.	0 0	.. 0 0	55 0	.. 65 0
Florence, white	per lb.	0 0	.. 0 0	0 0	.. 0 0
red	per lb.	0 0	.. 0 0	0 0	.. 0 0
Ashes (see Potash and Soda)					
Bleaching powd.	per cwt.	8 6	.. 9 0	9 0	.. 9 3
Borax, crude	per lb.	25 0	.. 40 0	25 0	.. 35 0
(Tincal)	per lb.	45 0	.. 60 0	45 0	.. 60 0
British refnd.	per lb.	68 0	.. 70 0	68 0	.. 70 0
Calomel	per lb.	2 8	.. 0 0	2 5	.. 0 0
Copper:					
Sulphate	per cwt.	23 0	.. 24 0	23 6	.. 24 0
Copperas, green	per ton	50 0	.. 60 0	52 6	.. 60 0
Corrosive Sublimate ..	per lb.	2 0	.. 0 0	1 11	.. 0 0
Cr. Tartar, French, p. cwt.		88 0	.. 90 0	83 6	.. 84 0
Venetian grey	per lb.	90 0	.. 96 0	0 0	.. 0 0
brown	per lb.	0 0	.. 0 0	65 0	.. 74 0
Epsom Salts	per cwt.	6 0	.. 7 0	7 6	.. 8 0
Glauber Salts	per lb.	4 6	.. 6 0	4 6	.. 6 0
Lime:					
Acetate, white, per cwt.		12 6	.. 23 0	12 6	.. 23 0
Magnesia: Carbonate ..	per lb.	42 6	.. 0 0	42 6	.. 0 0
Potash:					
Bichromate	per lb.	0 5	.. 0 5½	0 5	.. 0 0
Carbonate:					
Potashes, Canada, 1st					
sort	per cwt.	38 0	.. 0 0	31 0	.. 0 0
Pearlashes, Canada, 1st					
sort	per cwt.	48 0	.. 0 0	32 0	.. 0 0
Chlorate	per lb.	1 4	.. 0 0	0 11	.. 0 0
Prussiate	per lb.	1 0	.. 0 0	0 11½	.. 0 11½
red	per lb.	1 9½	.. 1 10	1 9½	.. 1 10
Tartrato (see Argol and Cream of Tartar)					
Potassium:					
Chloride	per cwt.	14 0	.. 0 0	7 10	.. 8 0
Iodide	per lb.	12 0	.. 0 0	12 0	.. 0 0
Quinine:					
Sulphate, British, in					
bottles	per oz.	6 3	.. 6 5	5 9	.. 0 0
Sulphate, French	per lb.	6 1	.. 0 0	5 4	.. 0 0
Sal Acetate	per lb.	0 10	.. 0 0	0 10	.. 0 0
Sal Ammoniac, Brit. cwt.		41 0	.. 42 0	36 6	.. 38 6
Saltpetre:					
Bengal, 6 per cent. or					
under	per cwt.	31 6	.. 34 0	20 6	.. 21 3
Bengal, over 6 per cent.					
per cwt.		30 0	.. 31 0	19 6	.. 20 3
Madras	per lb.	0 0	.. 0 0	13 6	.. 19 3
Bomb & Kurracheep. et.		0 0	.. 0 0	0 0	.. 0 0
European	per lb.	0 0	.. 0 0	0 0	.. 0 0
British, refined	per lb.	35 6	.. 36 0	25 0	.. 26 0
Soda: Bicarbonate, p. cwt.		10 0	.. 0 0	9 9	.. 10 0
Carbonate:					
Soda Ash	per deg.	0 1½	.. 0 2	0 1½	.. 0 0
Soda Crystals per ton		72 6	.. 75 0	77 6	.. 0 0
Hyposulphite	per cwt.	18 0	to 0 0	16 0	to 18 0

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Soda:		s. d.	s. d.	s. d.	s. d.
Nitrate	per cwt.	15 6	.. 15 9	15 6	.. 16 0
SUGAR OF LEAD, White, cwt.		39 0	.. 40 0	39 0	.. 40 0
Brown	per lb.	26 0	.. 28 0	19 0	.. 30 0
SULPHUR (see Brimstone)					
VERDIORIS	per lb.	1 0	.. 1 2	1 0	.. 1 2
VERMILION, English ..	per lb.	2 7	.. 2 9	2 6	.. 3 0
China	per lb.	3 0	.. 3 1	2 7	.. 0 0
DRUGS.					
ALDES, Hepatic	per cwt.	60 0	.. 160 0	80 0	.. 180 0
Socotrine	per lb.	100 0	.. 220 0	120 0	.. 300 0
Cape, good	per lb.	25 0	.. 28 0	29 0	.. 32 0
Inferior	per lb.	17 0	.. 24 0	18 0	.. 23 0
Barbadoes	per lb.	80 0	.. 220 0	80 0	.. 200 0
AMBERGRIS, grey	oz.	25 0	.. 30 0	27 6	.. 32 6
BALSAMS—					
Canada	per lb.	1 0	.. 0 0	1 3	.. 0 0
Cascarilla	per lb.	1 9	.. 1 10	1 9	.. 1 10
Capivi	per lb.	9 9	.. 10 0	11 9	.. 12 0
Peru	per lb.	2 3	.. 2 6	2 3	.. 0 0
Tolu	per lb.	2 3	.. 2 6	2 3	.. 0 0
BARKS—					
Canella alba	per cwt.	19 0	.. 32 0	24 0	.. 38 0
Cascarilla	per lb.	22 0	.. 34 0	26 0	.. 36 0
Peru, crown & grey ..	per lb.	0 10	.. 2 4	0 10	.. 2 3
Calisaya, flat	per lb.	3 4	.. 3 6	3 3	.. 3 8
quill	per lb.	3 4	.. 3 7	3 3	.. 3 7
Carthagea	per lb.	1 0	.. 1 9	0 8	.. 1 6
Pitayo	per lb.	0 10	.. 1 6	0 6	.. 1 5
Red	per lb.	1 6	.. 5 6	2 0	.. 8 0
Bucho Leaves	per lb.	0 3	.. 0 6	0 3½	.. 0 7
CAMPOR, China	per cwt.	76 0	.. 79 0	37 6	.. 100 0
Japan	per lb.	81 0	.. 82 6	97 6	.. 0 0
Refin Eng. per lb.		1 2½	.. 0 0	1 5	.. 0 0
CANTHARIDES	per lb.	3 0	.. 0 0	2 8	.. 2 9
CHAMOMILE FLOWERS ..	per cwt.	40 0	.. 72 6	50 0	.. 90 0
CASTOREUM	per lb.	3 0	.. 30 0	4 0	.. 32 0
DRAGON'S BLOOD, lump	per lb.	90 0	.. 200 0	100 0	.. 160 0
FRUITS AND SEEDS (see also Seeds and Spices.)					
Anise, China Star pr	per cwt.	110 0	.. 115 0	105 0	.. 110 0
German, &c.	per lb.	25 0	.. 40 0	26 0	.. 38 0
Beans, Tonquin	per lb.	1 0	.. 1 6	1 0	.. 1 6
Cardamoms, Malabar					
good	per lb.	10 0	.. 12 0	7 9	.. 8 0
inferior	per lb.	7 6	.. 9 6	5 0	.. 7 0
Madras	per lb.	5 6	.. 10 0	4 6	.. 7 9
Ceylon	per lb.	3 0	.. 3 6	2 6	.. 3 3
Corozo Nuts	per cwt.	10 0	.. 12 0	16 0	.. 19 0
Cassia Fistula	per lb.	16 0	.. 35 0	20 0	.. 45 0
Castor Seeds	per lb.	10 0	.. 12 0	11 0	.. 13 0
Cocculus Indicus	per lb.	19 0	.. 20 0	25 0	.. 0 0
Colocyth, apple	per lb.	0 4	.. 0 8	0 5	.. 0 9
Croton Seeds	per cwt.	62 0	.. 76 0	62 0	.. 73 0
Cubebs	per lb.	27 6	.. 32 6	36 0	.. 40 0
Cumin	per lb.	40 0	.. 55 0	55 0	.. 65 0
Dividivi	per lb.	12 0	.. 14 0	10 6	.. 12 6
Fenugreek	per lb.	12 0	.. 15 0	9 0	.. 14 0
Guinea Grains	per lb.	29 0	.. 82 0	36 0	.. 37 0
Juniper Berries	per lb.	10 6	.. 0 0	7 0	.. 8 0
Myrobalans	per lb.	8 0	.. 16 0	9 0	.. 16 0
Nux Vomica	per lb.	10 0	.. 14 0	12 0	.. 14 6
Tamarinds, East India	per lb.	10 0	.. 16 0	12 0	.. 21 0
West India, new	per lb.	10 6	.. 20 0	12 0	.. 22 0
Vanilla, large	per lb.	32 0	.. 37 0	22 0	.. 26 0
inferior	per lb.	25 0	.. 30 0	10 0	.. 21 0
Wormseed	per cwt.	35 6	.. 0 0	25 0	.. 30 0
GINGER, Preserved, in bond					
(duty 1d. per lb.) ..	per lb.	0 6	.. 0 8	0 6	.. 0 9
GEMS (see separate list)					
HONEY, Narbonne	per lb.	45 0	.. 55 6	25 0	.. 35 0
Cuba	per lb.	22 0	.. 36 0	21 0	.. 36 0
Jamaica	per lb.	31 0	.. 52 0	25 0	.. 45 0
IPECACUANHA	per lb.	5 0	.. 5 3	5 6	.. 5 9
ISINGLASS, Brazil	per lb.	2 1	.. 4 10	2 6	.. 4 7
Tongue sort	per lb.	3 4	.. 5 2	3 1	.. 5 0
East India	per lb.	1 9	.. 4 2	2 3	.. 4 4
West India	per lb.	4 1	.. 4 6	4 0	.. 4 7
Russ. long staplo	per lb.	5 6	.. 8 0	5 0	.. 8 0
leaf	per lb.	3 0	.. 5 6	3 0	.. 5 9
Simovia	per lb.	1 6	.. 2 6	1 6	.. 2 6
JALAP, good	per lb.	2 0	.. 3 0	3 2	.. 4 0
infer. & stems	per lb.	0 6	.. 2 7	0 6	.. 3 0
LEMON JUICE	per degroo	0 1	.. 0 1½	0 1	.. 0 1½
LIQUORICE, Spanish ..	per cwt.	0 0	.. 0 0	63 0	.. 68 0
Italian	per lb.	40 0	.. 60 0	48 0	.. 67 0
MANNA, flaky	per lb.	2 10	.. 3 6	4 0	.. 4 9
small	per lb.	1 9	.. 0 0	2 0	.. 2 6
MUSK	per oz.	17 6	.. 34 0	19 0	.. 35 0
OILS (see also separate List)					
Almond, expressed ..	per lb.	1 0	.. 0 0	1 1	.. 0 0
Castor, 1st pale	per lb.	0 4½	.. 0 5	0 5½	.. 0 5½
second	per lb.	0 4½	.. 0 4½	0 4½	.. 0 5
infer. & dark	per lb.	0 4	.. 0 4½	0 4½	.. 0 0
Bombay (in casks) ..	per lb.	0 4	.. 0 4½	0 4½	.. 0 0
Cod Liver	per gall.	5 0	.. 6 6	5 6	.. 7 0
Croton	per oz.	0 3½	.. 0 4½	0 3	.. 0 4
Essential Oils:					
Almond	per lb.	42 0	.. 0 0	42 6	.. 0 0
Anise-seed	per lb.	8 0	.. 0 0	8 6	.. 9 0
Bay	per cwt.	65 0	.. 70 0	65 0	.. 70 0
Bergamot	per lb.	8 0	.. 15 0	8 0	.. 12 0
Cajuput, (in bond) ..	per oz.	0 2½	.. 0 3	0 1½	.. 0 2
Caraway	per lb.	5 6	.. 6 3	5 3	.. 5 9
Cassia	per lb.	4 2	.. 4 3	4 10	.. 5 0
Cinnamon	per oz.	1 0	.. 4 6	1 0	.. 4 6
Cinnamon-leaf	per lb.	0 2	.. 0 6	0 4	.. 0 0

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Essential Oils, continued:—								Oils, continued:—							
	s. d.	s. d.		s. d.	s. d.			£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.	£ s.
Citronelle per oz.	0 2	.. 0 2½		0 2½	.. 0 2½		COD	39 0	.. 39 10	44 0	.. 45 0				
fine.....	0 2½	.. 0 2½		0 3	.. 0 3½		WHALE, South Sea, pale ..	37 0	.. 37 10	37 0	.. 0 0				
Clove..... per lb.	2 6	.. 0 0		2 7	.. 0 0		yellow ..	36 10	.. 0 0	36 0	.. 0 0				
Juniper	1 9	.. 2 0		1 9	.. 2 0		brown ..	35 0	.. 0 0	34 0	.. 25 0				
Lavender.....	3 0	.. 4 3		3 0	.. 4 3		East India, Fish ..	32 0	.. 33 0	32 0	.. 0 0				
Lemon.....	5 0	.. 0 6		4 6	.. 7 0		OLIVE, Gadipoli	50 0	.. 0 0	55 0	.. 0 0				
Lemongrass per oz.	0 2½	.. 0 3		0 4½	.. 0 4½		Trieste	47 0	.. 0 0	54 0	.. 0 0				
Neroli	0 5	.. 0 6		0 5	.. 0 6		Levant	48 0	.. 0 0	52 10	.. 0 0				
Nutmeg	0 4	.. 0 7½		0 4	.. 0 8		Mogador.....	45 0	.. 46 0	52 0	.. 0 0				
Orange..... per lb.	5 0	.. 7 0		5 0	.. 8 0		Spanish	50 0	.. 0 0	53 10	.. 54 0				
Otto of Roses..... per oz.	13 0	.. 20 0		14 0	.. 21 0		Sicily	48 0	.. 49 0	53 0	.. 0 0				
Patchouli	6 0	.. 0 0		6 0	.. 0 0		COCOANUT, Cochin... per ton	42 10	.. 43 10	44 0	.. 0 0				
Peppermint:							Ceylon ..	37 0	.. 0 0	41 0	.. 0 0				
American per lb.	15 0	.. 15 6		17 0	.. 18 6		Sydney ..	32 0	.. 30 10	38 0	.. 42 0				
English	36 0	.. 38 0		32 0	.. 42 0		GROUND NUT AND GINCELLY:								
Rosemary	1 9	.. 2 0		1 9	.. 2 0		Bombay	0 0	.. 0 0	0 0	.. 0 0				
Sassafras	3 0	.. 0 0		4 0	.. 4 6		Madras	45 0	.. 0 0	40 0	.. 41 0				
Spearmint	4 0	.. 16 0		4 0	.. 18 0		PALM, fine	30 10	.. 40 0	41 10	.. 42 0				
Thymo.....	1 10	.. 2 0		1 10	.. 2 0		LINSEED	29 15	.. 0 0	31 5	.. 0 0				
Mace, expressed .. per oz.	0 1	.. 0 2½		0 1	.. 0 2½		RAPESEED, English, palo ..	45 10	.. 0 0	41 10	.. 0 0				
OPIMUM, Turkey..... per lb.	30 0	.. 34 0		30 0	.. 34 0		brown.....	44 0	.. 0 0	39 0	.. 0 0				
inferior	20 0	.. 29 0		18 0	.. 28 0		Foreign palo.....	47 0	.. 0 0	42 10	.. 0 0				
QUASSIA(bitterwood) per ton	100 0	.. 150 0		175 0	.. 0 0		brown.....	45 10	.. 0 0	39 10	.. 0 0				
RHUBARB, China, good and							COTTONSEED	28 0	.. 34 0	30 0	.. 36 0				
fine	4 6	.. 8 0		4 6	.. 9 3		LARD	70 0	.. 72 0	70 0	.. 72 0				
Good, mid. to ord. ..	0 7	.. 4 3		0 8	.. 4 0		TALLOW	35 0	.. 0 0	35 0	.. 0 0				
Dutch trimmed ..	9 6	.. 10 0		10 0	.. 0 0		TURPENTINE, American, cks.	30 6	.. 0 0	20 6	.. 26 9				
Russian	0 0	.. 0 0		0 0	.. 0 0		PETROLEUM, Crude	0 0	.. 0 0	14 0	.. 0 0				
ROOTS—Calumba..... per cwt.	27 0	.. 42 6		40 0	.. 50 0		s. d.	s. d.	s. d.	s. d.					
China	25 0	.. 35 0		27 0	.. 35 0		refined, per gall.	1 5½	.. 1 6	1 7	.. 0 0				
Galangal	17 0	.. 19 0		15 0	.. 20 0		Spirit ..	0 11	.. 1 0½	0 10	.. 0 11				
Gentian	25 0	.. 26 0		19 0	.. 20 0		SEEDS.	s. d.	s. d.	s. d.	s. d.				
Hellebore	22 0	.. 30 0		22 0	.. 30 0		CANARY	48 0	.. 60 0	55 0	.. 65 0				
Orris	50 0	.. 52 0		38 0	.. 44 0		CARAWAY, English per cwt.	40 0	.. 45 0	40 0	.. 46 0				
Pellitory	58 0	.. 60 0		58 0	.. 60 0		German, &c.....	25 0	.. 34 0	34 0	.. 43 0				
Pink..... per lb.	0 7	.. 0 10		0 7	.. 0 10		CORIANDER	0 0	.. 0 0	20 0	.. 21 0				
Rhatany	0 8	.. 0 10		0 5	.. 0 10		HEMP	44 0	.. 48 0	42 0	.. 44 0				
Seneca.....	2 10	.. 3 0		1 6	.. 0 0		LINSEED, English per qr.	0 0	.. 0 0	0 0	.. 0 0				
Snake	1 0	.. 0 0		1 2	.. 0 0		Black Sea & Azof ..	61 6	.. 0 0	58 6	.. 0 0				
SAFFRON, Spanish ..	54 0	.. 0 0		30 0	.. 33 0		Calcutta ..	64 6	.. 65 0	61 6	.. 62 0				
SALBP	110 0	.. 0 0		110 0	.. 120 0		Bombay ..	65 0	.. 0 0	62 0	.. 62 6				
SARSAPARILLA, Lima per lb.	0 6	.. 0 7½		0 7	.. 0 8		St. Petersburg ..	58 0	.. 59 0	56 6	.. 57 0				
Parz.....	1 0	.. 1 3		1 0	.. 1 3		Mustard, brown... per bshl.	0 0	.. 0 0	15 0	.. 18 0				
Honduras	1 1	.. 1 6½		1 1	.. 1 6		white ..	0 0	.. 0 0	12 0	.. 17 0				
Jamaica	1 9	.. 3 2		1 8	.. 2 6		POPPY, East India per qr.	57 0	.. 0 0	58 0	.. 58 6				
SASSAFRAS	0 0	.. 0 0		13 0	.. 14 0		SPICES.								
SCAMMONY, Virgin .. per lb.	28 0	.. 32 0		28 0	.. 34 0		CASSIA LIONEA per cwt.	100 0	.. 112 0	124 0	.. 132 0				
second & ordinary ..	10 0	.. 23 0		10 0	.. 23 0		Vera	47 0	.. 82 0	45 0	.. 85 6				
SENA, Bombay	0 3½	.. 0 6		0 3	.. 0 5½		Buds	155 0	.. 175 0	140 0	.. 162 6				
Tinnivelly	0 3½	.. 1 4		0 2	.. 0 11		CINNAMON, Ceylon,								
Alexandria.....	0 4½	.. 1 7		0 10	.. 1 8		1st quality per lb.	1 9	.. 3 8	2 0	.. 3 7				
SPERMACEI, refined..	1 6	.. 1 7		1 4	.. 1 5		2nd do.....	1 4	.. 3 6	1 9	.. 3 5				
American	1 5	.. 0 0		1 4	.. 0 0		3rd do.....	1 2	.. 3 5	1 4	.. 3 2				
SQUILL.....	0 1½	.. 0 2½		0 1	.. 0 2½		Tellicherry	2 8	.. 3 1	2 5	.. 2 9				
GUMS.							CLOVES, Penang.....	0 11½	.. 1 1½	0 10	.. 0 11½				
AMMONIAC drop .. per cwt.	105 0	.. 130 0		200 0	.. 240 0		Amboyna.....	0 4½	.. 0 5½	0 4½	.. 0 5½				
lump ..	60 0	.. 90 0		120 0	.. 200 0		Zanzibar	0 3	.. 0 3½	0 2½	.. 0 3				
ANIMI, fine washed ..	300 0	.. 340 0		280 0	.. 320 0		GINGER, Jam, fine per cwt.	90 0	.. 180 0	90 0	.. 200 0				
boldscraped ..	220 0	.. 200 0		200 0	.. 250 0		Ord. to good ..	32 0	.. 80 0	36 0	.. 80 0				
sorts	160 0	.. 200 0		100 0	.. 190 0		African	27 0	.. 29 0	24 6	.. 25 0				
dark	75 0	.. 100 0		80 0	.. 110 0		Bengal	26 6	.. 27 0	26 0	.. 27 0				
ARABIC, E. I., fine							Malabar	23 0	.. 27 0	0 0	.. 0 0				
pale picked ..	72 0	.. 76 0		78 0	.. 82 0		Cochin	32 0	.. 120 0	38 0	.. 120 0				
sorts, gd. to fin ..	60 0	.. 70 0		65 0	.. 76 0		PEPPER, Blk, Malabar, per lb.	0 5½	.. 0 6	0 5	.. 0 5½				
garblings ..	32 0	.. 52 0		40 0	.. 60 0		White, Tellicherry ..	0 5	.. 0 5½	0 0	.. 0 0				
TURKEY, pick, gd to fin.	170 0	.. 210 0		170 0	.. 220 0		Cayenne	0 8	.. 1 1½	0 6	.. 0 11½				
second & inf.	90 0	.. 160 0		90 0	.. 160 0		MACE, 1st quality .. per lb.	3 1	.. 3 9	2 10	.. 3 6				
in sorts ..	75 0	.. 100 0		70 0	.. 100 0		2nd and inferior ..	2 5	.. 3 0	2 0	.. 2 8				
Gedda.....	38 0	.. 44 0		38 0	.. 45 0		NUTMEOS, 78 to 60 to lb.	2 7	.. 4 4	2 3	.. 4 2				
BARBARY, white ..	75 0	.. 82 6		83 0	.. 85 0		90 to 80 ..	2 2	.. 2 6	1 10	.. 2 2				
brown ..	63 0	.. 68 0		67 0	.. 72 6		132 to 95 ..	1 6	.. 2 1	1 5	.. 1 9				
AUSTRALIAN	20 0	.. 42 0		25 0	.. 45 0		VARIOUS PRODUCTS.								
ASSAFETIDA, com. to gd.	30 0	.. 90 0		23 0	.. 85 0		COCHINEAL—								
BENJAMIN, 1st qual.	280 0	.. 460 0		240 0	.. 500 0		Honduras, black .. per lb.	2 7	.. 3 10	2 10	.. 4 0				
2nd ..	140 0	.. 200 0		140 0	.. 220 0		" silver ..	2 6	.. 2 11	2 7	.. 3 1				
3rd ..	50 0	.. 100 0		50 0	.. 120 0		" pasty ..	2 0	.. 2 5	0 0	.. 0 0				
COPAL, Angola red ..	90 0	.. 100 0		100 0	.. 107 6		Mexican, black	2 7							

